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The Mississippi Doctor

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The way today my steps should turn
To shun defeat and to attain
The happy heights I hope to gain.

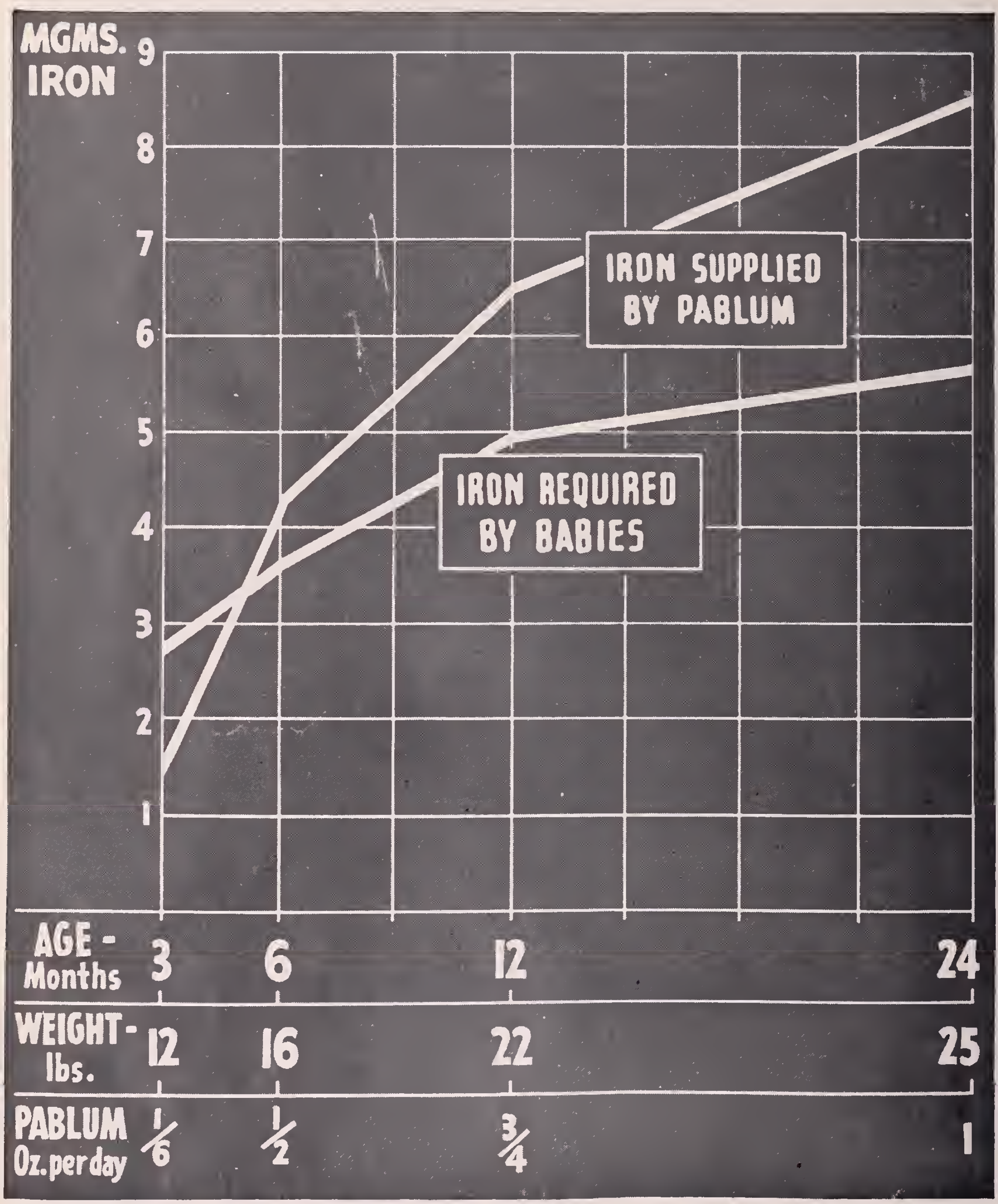
God give me courage to aspire,
The grit to grasp my heart's desire,
An iron will that scorns to yield,
Whatever foeman takes the field.

God give me patience to pursue
The trail attempted, bravely through.
For fortitude to face each task
Serenely, Lord, I fondly ask.

For lighter loads I breathe no prayer,
But for the sturdy strength to bear
Whatever burdens life may bring,
The strength to bear them and to sing.

God, give me faith to light the way
And hope to turn to gold the gray,
And love, O Lord, to make me true
To self, to others, and to You.

—David E. Guyton.
Blue Mountain, Mississippi.



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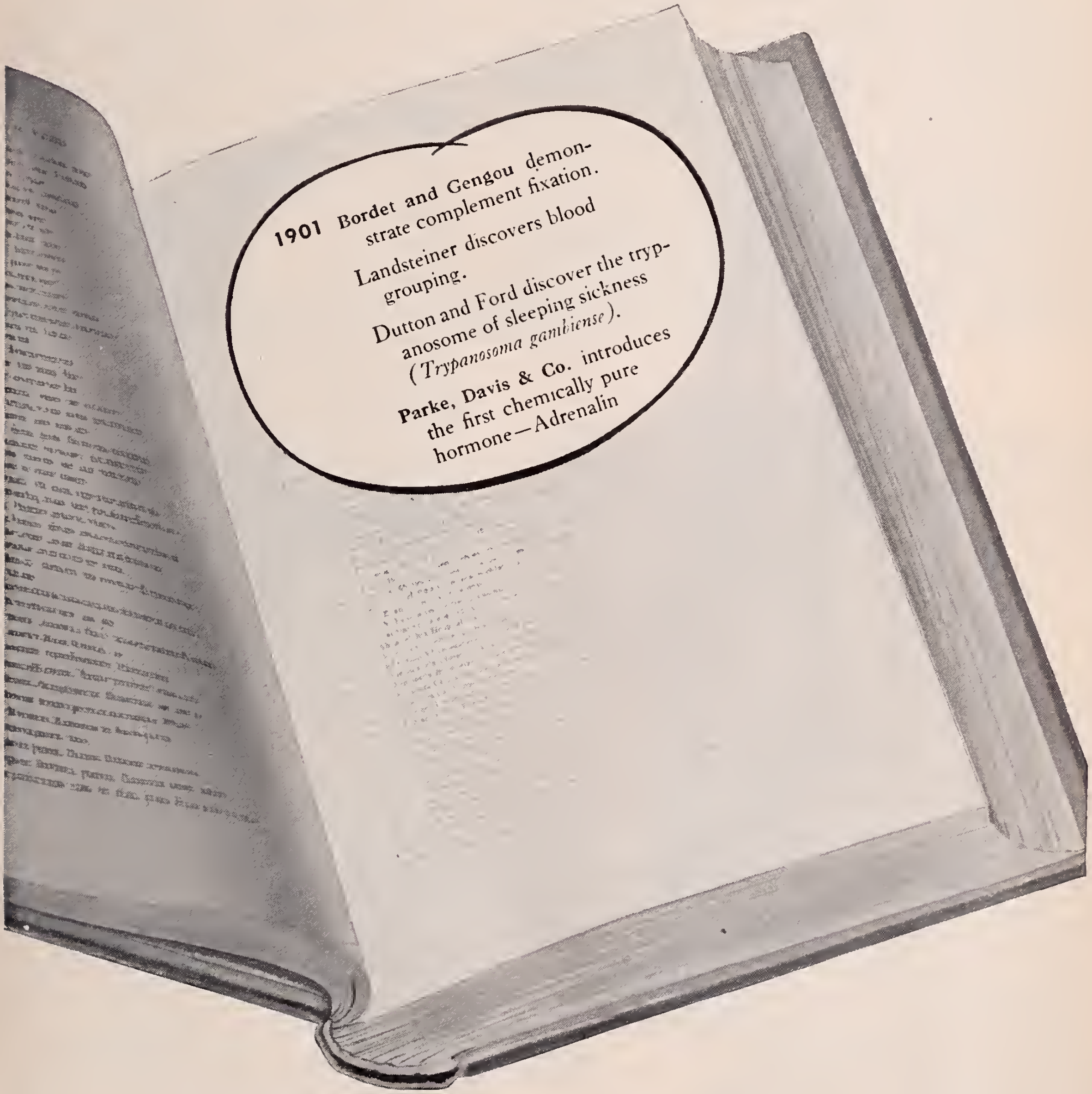

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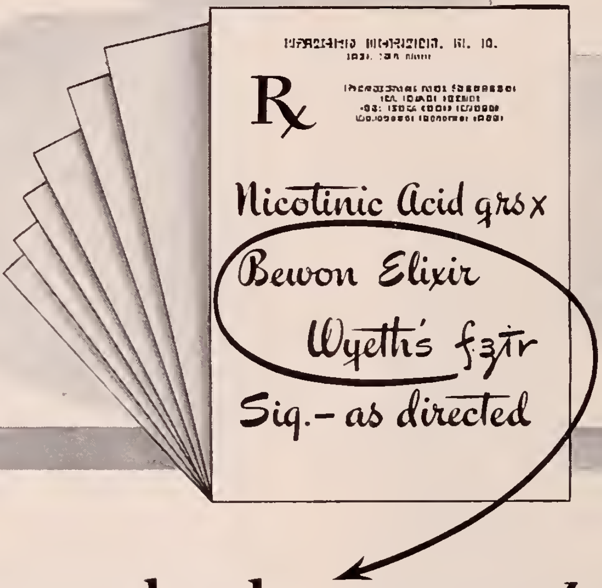
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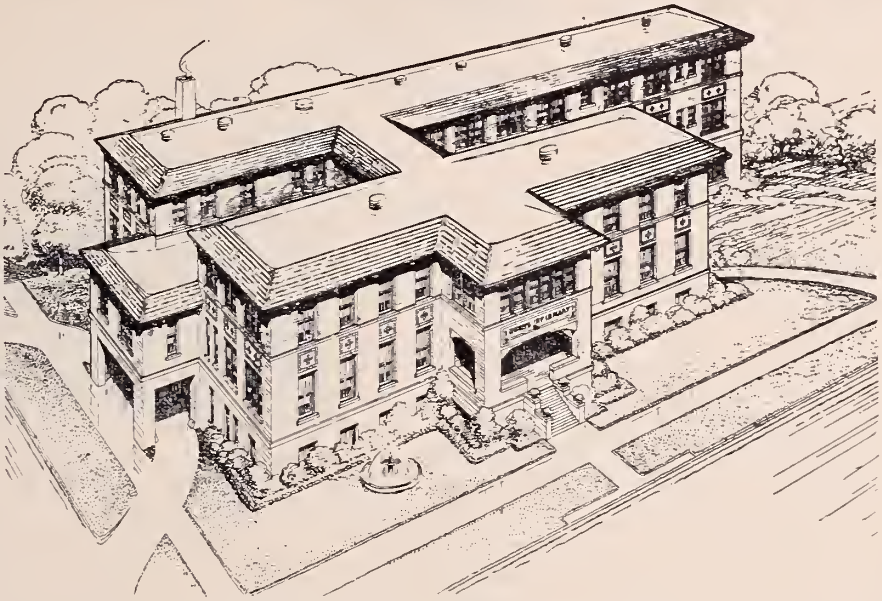

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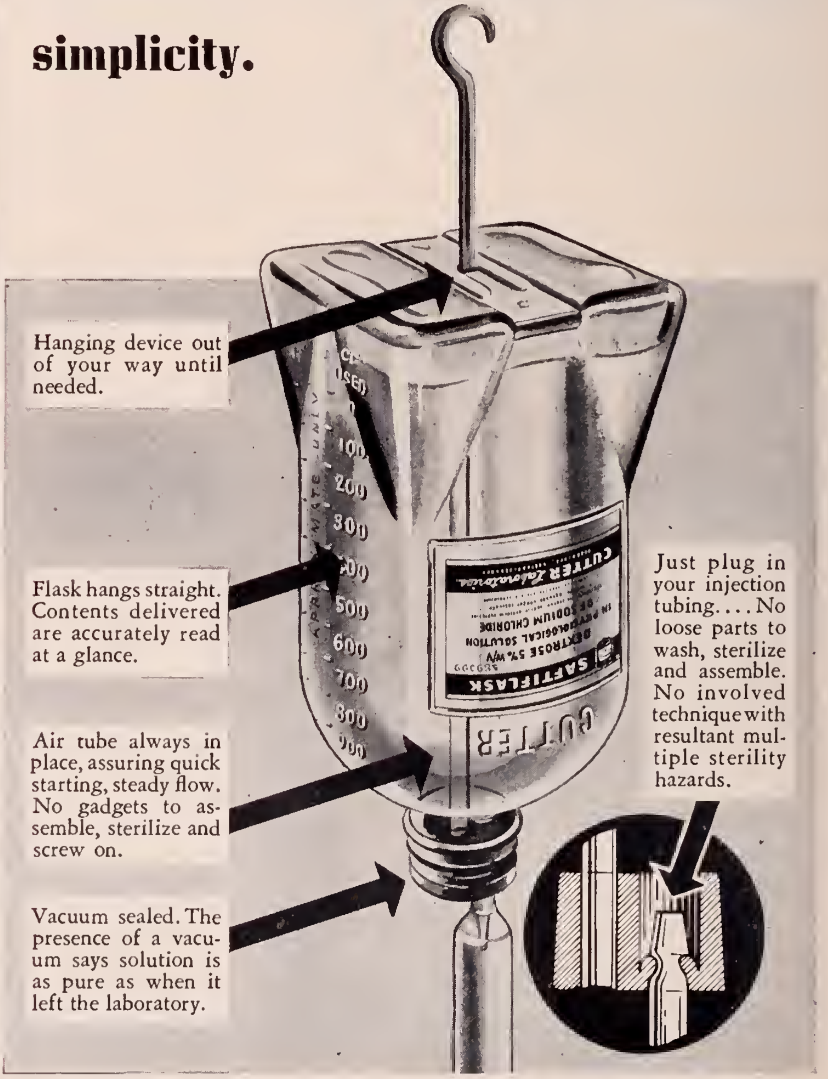
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The Diagnosis and Treatment of Ovarian Failure During the Reproductive Period*

E. C. HAMBLEN, M.D.†
DURHAM, N. C.

THE ENDOCRINE SYSTEM has a dominant role in gynetic physiology. Many aberrations occur in the functions of the female sexual system. These are related often by fact or by theory to alterations in ovarian function. The result has been that woman has been a willing recipient of a generous, if not always rational, organotherapy.

Most of us, doubtlessly until of very recent years, have been quite uncritical in the diagnosis of ovarian failure. It was taken for granted, more or less, that, if cursory diagnostic inquiries indicated the non-existence of any organic pathology, the woman was suffering likely from ovarian failure. This simple diagnosis usually was considered to be established if any of the following symptoms were present: vasomotor instability, headaches, dysmenorrhea, irregularities of uterine bleeding, sexual incompatibilities such as frigidity, dyspareunia or vaginismus, sterility, nausea and vomiting of pregnancy or repeated spontaneous abortions. Often one of the traveling emissaries of advanced organotherapeutics (certain detail men) paid us a visit, confirmed eagerly our diagnosis by the very symptoms and obligingly outlined a series of therapy for our patient, which coincidentally always embraced the use of products manufactured by his pharmaceutical concern. This constitutes a picture, as you well know, of endocrinology at its worst.

DIAGNOSIS OF OVARIAN FAILURE

The necessary prerequisite to any rational therapy is the establishment of a correct diagnosis. The diagnosis of ovarian failure has two important facets, neither of which is easy of attainment: 1) the actual proof that the function of the ovaries is impaired and to what degree; 2) the segregation of the cause of this failure. These diagnostic data define the prognosis and indicate the therapy.

There are only 3 common symptoms of marked or complete ovarian failure: 1) failure of occurrence or cessation of menstruation, 2) sterility and, 3) non-occurrence of sexual maturation or the eventual alterations in the sexual organs. None of these impairs health; witness the two physiologic epochs of relative hypo-ovarianism, preadolescence and postmenopausal senescence. The majority of young women in good general health and with stable nervous systems, who have had bilateral oophorectomies, experiences few or any of the other distressing symptoms, commonly attributed to ovarian failure. Spontaneous ovarian failure, such as that characterized by amenorrhea and sterility, (i.e., premature menopause) may produce no psychic, nervous or organic distress. The majority of women goes through the climacteric without experiencing any symptoms which interfere with the daily routine of life.

For the most part, our diagnoses of ovarian failure are essentially qualitative. We cannot even consider the various supposed instances of low-grade or relative ovarian failure without falling into a quagmire of dispute and unsubstantiated theories. The qualitative diagnosis of ovarian failure usually concerns two grades of failure: 1) non-occurrence of the corpus luteum phase (thought to be synonomous with failure of ovulation; and 2) the existence of inadequate estrogenic (follicular) activity for maturation and normal maintenance of the sexual organs and for the occurrence of uterine bleeding.

At times the diagnosis of ovarian failure is easy and self-evident; i.e., when both ovaries are known to have been removed or rendered functionally inactive by the roentgen-ray or radium: when a patient of postadolescent or adult years has failed to experience sexual maturation and menarche; when a woman of climacteric age has ceased to menstruate. Likewise a negative diagnosis as to the non-existence of any significant degree of ovarian failure is permitted when a woman is able to become pregnant. The ability to conceive is the best functional test we possess for the ovaries.

---

*Read before the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 11-14, 1941.

†From the Endocrine Division, Department of Obstetrics and Gynecology, Duke University School of Medicine and Duke Hospital.

Corpus luteum failure is diagnosed by the simple technic of endometrial biopsy. Small representative portions of the endometrium are secured by punch or by suction within the first 12 to 24 hours after an onset of spontaneous bleeding. These are fixed, mounted and stained by the usual hemotoxylin-eosin method. If microscopic study shows the endometrium to be in an estrogenic (interval) phase rather than in a progestational (premenstrual or menstrual) phase, we have presumptive evidence that ovulation and corpus luteum proliferation have failed.

Since, however, normal women may have 2 to 5 'anovulatory' cycles a year, depending upon their ages, repeated biopsies are necessary at the onset of several consecutive episodes of bleeding to establish the significant occurrence of corpus luteum failure.

One who is familiar with endometrial architecture may be able to diagnose tentatively the existence of relative corpus luteum failure from the repeated occurrences of poorly or irregularly proliferated progestational endometria in association with bleeding.

Quantitation of daily 24-hour specimens of urine during the 14 days immediately prior to bleeding for products of corpus luteum hormone metabolism (pregnandiol) adds complementary diagnostic data to those secured from endometrial studies. This procedure, like most of those of hormonal titration, is onerous, time-consuming and expensive; it is only practical in well equipped clinics or research institutions. For all practical purposes, the data from endometrial studies suffice to diagnose the occurrence or non-occurrence of ovarian sterility.

The diagnosis of estrogenic failure is made upon the following grounds: failure of occurrence or incomplete development of growth, differentiation and maturation of the sexual organs or secondary regressions in these; anthropometric variations and failure of epiphyseal closures when failure occurred during adolescence; peculiarities of body habitus, due in part to abnormalities in fat padding; and abnormal epithelial responses, i.e., of vaginal epithelium, as judged by studies of smears or biopsies, which show atrophic or regressive alterations, and of the endometrium, as judged by biopsies, which show persistent estrogenic responses, often extreme atrophy; and decreased urinary titers of estrogens.

Irregularities of uterine bleeding cannot be regarded as being indicative necessarily of ovarian failure. Causes of these are legion. Minor irregularities are often normal for the individual. Marked disturbances in the cyclicity of bleeding may occur without any serious impairment of fertility. Amenorrhea of more than several months' duration, if no pregnancy exists, is usually due to a significant impairment of ovarian function.

THE CAUSE OF OVARIAN FAILURE

Ovarian failure may be due to I) extra-endocrine and II) endocrine factors. There are many individual causes in each of these two general groups.

I. *Extra-endocrine causes* include: acute and chronic debilitating disease, inanition and vitamin deficiencies; various emotional and psychic crises; changes in altitude and climate. These causes are mediated most likely to the ovaries by means of disturbances produced in pituitary function.

II. *Endocrine causes* may be classified as follows:

1) *Intrinsic ovarian failure*: The ovaries are incapable of yielding normal responses due to a) developmental inadequacy, b) incomplete puerperal recovery, c) local pelvic disease, d) premature senescence, e) physiologic immaturity or senility, f) damage from roentgen-ray or radium or, g) removal by surgery.

Pituitary function in these instances is normal or even increased. No rationale exists under these circumstances for giving therapeutically pituitary or pituitary-like gonadotropins (gonadal activators or stimulators). Unless recovery of ovarian responsiveness occurs spontaneously or can be brought about due to local alterations, substitutional therapy is the only effective means of treatment.

2) *Ovarian failure due to hypofunction of the pituitary*: Inadequate gonadotropins are supplied by the pituitary for the activation of normal ovarian responses. Pituitary failure, occurring before adolescence or during the reproductive period, may be due to damage from tumors, invasions, intrinsic inadequacy or untoward peripheral influences (see 'extra-endocrine factors'). The therapeutic use of gonadotropins under these circumstances constitutes rational therapy.

3) *Ovarian failure due to pituitary alterations, induced by disturbances in other glands (i.e., thyroid or adrenal)*: Fluctuations in thy-

roid function alter pituitary function, which in turn may result in adverse changes in the activation of the ovaries. Surgical, roentgenologic or medical handling of hyperthyroidism and adequate thyroid therapy in hypothyroidism constitutes rational therapy for this type of ovarian failure.

Adrenogenitalism, resulting from tumors or hyperplasia of the adrenal cortex, is characterized by the secretion of large amounts of male hormone (androgens). In addition to producing 'virilizing' effects, ovarian impairment may be produced in several ways: a) the excessive secretion of androgens depresses the gonad-activating function of the pituitary; b) the androgens produce regressional changes in the genitals; c) the sequential disturbances in androgen-estrogen ratios upset endometrial responses. Adequate surgical treatment of adrenogenitalism may permit the return of normal ovarian function.

4) *Ovarian failure due to diabetes mellitus*: The cachexia which results from the metabolism disturbances of diabetes alters the pituitary gonadotropic functions and produces impairment of ovarian function. Adequate insulin and dietetic therapy usually results in a return of normal ovarian function. In instances, wherein ovarian failure persists despite apparent effective regulation of the diabetes, it is explainable probably upon the basis of alterations in ovarian blood supply due to arteriosclerosis.

5) *Ovarian failure due to altered metabolism, resulting from disturbances in thyroid or adrenal*: The disturbed oxygen metabolism of thyroid disease may be reflected directly in alterations of ovarian function. A propitious local metabolism of oxygen doubtlessly is one of the factors necessary for normal ovarian responsiveness to pituitary activation. Expressions of this disturbance may be an endocrine failure of the ovaries or only a germinal failure, characterized by the discharge at ovulation of blighted or imperfectly formed ova. Adequate therapy of thyroid disease is usually effective in assuring the return of normal ovarian function.

The metabolic disturbances which characterize adrenal failure and which involve fundamental alterations in the handling of water, electrolytes and glucose may impair ovarian function in several ways: a direct interference with pituitary activation of the ovaries may result from the cachexia of the disease; alterations in local tissue metabolism may interfere with ovarian responsiveness or cause the formation of blighted or germinally inadequate ova. Therapeutic effects of desoxycorticosterone acetate have been striking in correcting most of the disturbed metabolic manifestations of Addison's disease. Its ability to assure a return of normal ovarian function has not been established. The use of a complete cortical fraction may be necessary for this purpose since desoxycorticosterone acetate lacks the glucose fraction.

6) *Ovarian failure due to gametopathic factors*: The endocrine alterations described in types 1-5 may result in the formation and discharge of ova incapable of fertilization or of normal embryonal development. Non-endocrine or intrinsically germinal causes also may produce this situation. The cause of this gametophagic effect conditions the prognosis and defines the therapy.

7) *Ovarian failure due to endometriopathic factors:* The endometrium is an important link in the ovario-pituitary axis. Normal functional adequacy and responsiveness of it is necessary for the proper metabolism, utilization and excretion of the ovarian principles. If endometrial failure exists, ovarian failure may be apparent, due to inefficient utilization of the ovarian principles, or real, due to the pituitary depressing effects of retained products of incomplete hormone metabolism and excretion. Hysterectomy, even when ovaries are conserved, induces ovarian failure of this sort. Endometriopathic factors may be corrected at times by curettage or by the judicious use of ovarian principles. When the endometrial disturbance is due to fibrosis or tumors, little salvage of ovarian function is possible.

TREATMENT

References to rational therapy have been made in the course of the discussions of each of the general causes of ovarian failure. Some general statements are now in order in regard to the aims, practicality and limitations of certain types of treatment.

Cures of many types of ovarian failure come as by-effects of the required and necessary treatment of constitutional diseases and impairments. Examples of these secondary alterative effects have been cited for various ones of the endocrine diseases. Beneficial adjustments of errors in levels of nutrition (emaciation and obesity), correction of anemic states, removal of foci of infections and handling of chronic intoxications improve general health and, thereby, enhance ovarian function.

Except for instances, such as those above, in which general health is impaired and at the same time ovarian function, there are only 3 clear-cut indications for the treatment of ovarian failure *per se*: 1) to complete the sexual development and maturation of a patient with adolescent ovarian failure, primarily to circumvent eventual sterility and, secondarily, for cosmetic effects; 2) to overcome undesired sterility in the adult; and 3) to control functional meno-metrorrhagia of the young woman, who desires or may desire children. All of these indications concern the treatment of undesired sterility.

The treatment of irregular bleeding for the sole purpose of regulation of the cycle is useless, meddlesome and often harmful. The only indications for therapy are when undesired sterility has been related to these irregularities or when they are characterized by depleting hemorrhages.

When the existence of functional meno-metrorrhagia has been established by careful diagnostic surveys and when sterility at the present or in the future does not concern the patient and if any treatment is deemed necessary because of excessive blood loss, it is most expeditious, practical and economical to give a fractional dosage of intrauterine radium of sufficient amount to control excessive bleeding, but not enough to produce menopause.

Adolescent ovarian failure, characterized by failure of sexual differentiation and maturation and of menarche, is due commonly to 4 causes: 1) inanition from inadequate diet or cachexia from acute or chronic illnesses; 2) childhood hypothyroidism; 3) primary ovarian inadequacy; and 4) childhood pituitary deficiency. The nature of the treatment of the ovarian failure of patients of the first two classes is self evident. If it is not delayed too long and persisted in diligently, the chances of ultimate salvage are good.

A differential diagnosis between the last two classes is not always easy. We lack effective methods of diagnosing levels of pituitary function. Obviously, quantitation of titers of ovarian principles, even if practical as a routine clinical procedure, would not permit a diagnostic departure; these should be low in both groups. If there is dwarfing of stature one inclines toward pituitary failure as the primary cause. If there is overgrowth of the extremities with the result that span excedes height and the distance from the soles of the feet to the symphysis pubis excedes the distance from the symphysis pubis to the top of the head, one is led to believe that the failure is intrinsic in the ovaries.

It is our rule to give these patients a trial of pituitary therapy in order to test the receptivity or responsiveness of their ovaries. If positive responses occur, we feel justified in the assumption that the pituitary is the primary cause of ovarian failure and proceed with this type of therapy. Only the patients who respond to pituitary therapy permit the hope that they may secure salvage of physiologic ovarian function, endocrine and gametogenic.

The technic of the test of pituitary therapy is outlined briefly: Since no adequately potent gonadotropic extract of pituitary origin is available, we use a pituitary-like substance prepared from the serum of pregnant mares (equine gonadotropin[1]). A preliminary skin sensitivity test is done to avoid possible allergic complications. If this is negative, we proceed with therapy. Intramuscular injections of 400 to 800 international units of equine gonadotropin are given every other day for 6 weeks. During the course of this therapy, careful observations for ovarian responses are made. These responses are due to an increased secretion of estrogens due to stimulation of the ovaries.

Observations to be made at least every 10 days, preferably weekly, include: bimanual examination (rectal usually is necessary) to determine if any enlargements of ovaries, uterus or cervix are occurring; vaginal smears are studied for evidences of maturing effects of estrogens on the vaginal epithelium; depth and diameter of the vagina is estimated by sounding if necessary; alterations in size or consistency of breasts are looked for; if laboratory facilities permit estrogenic titers of the urine are determined. In some instances markedly sensitive ovaries will respond to this therapy by becoming rapidly enlarged and cystic; in these instances it is best to stop treatment until cysts disappear and then resume treatment at a lower dosage level.

Treatment of this type should not be continued without interruption for longer than 6 weeks, since antibodies are known to develop. These will undo the good effects of treatment. We give a rest period of 6 weeks between series of therapy. Usually, if a patient is going to respond to treatment, some evidence to this effect is obtained during the first series of therapy. However, even if no responses have been given, another similar series of treatment is given at the end of 6 weeks of rest. If no responses are obtained, the patient is given subsequently ovarian substitutional therapy.

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[1] Available commercial preparations of equine gonadotropins include: anteron (Schering Corp.), gonadin (Cutter Laboratories), gonadogen (Upjohn).

The method of handling patients who give positive responses to gonadotropic therapy is conditioned by the rapidity and degree of their responses. Series of treatment with equine gonadotropins with intervening rest periods are given until the uterus is brought to late adolescent size and contour. As the uterus and vagina enlarge, vaginal examinations with uterine measurements and endometrial biopsies become possible and are added to the list of observations to be made. When significant ovarian and uterine enlargements have been obtained, episodes of bleeding may occur. The nature of these (whether estrogenic or progestational) should be determined by endometrial biopsies. If progestational bleeding occurs (this is indicative of a complete ovarian response), all therapy should be discontinued and the patient's ovaries should be given a chance to demonstrate their spontaneous abilities. The same procedure is advisable even when estrogenic bleeding occurs. After genital growth has been obtained and bleeding has occurred, subsequent therapy, if necessary, is given according to the system of one-two cyclic gonadotropic therapy to be described later. In these instances, wherein patients respond to gonadotropic therapy, the whole course of adolescence may move rapidly to completion in six to twelve months.

Those patients who fail to give positive ovarian responses to gonadotropic therapy become candidates for replacement ovarian therapy. This form of therapy is singularly unsatisfactory for a number of reasons:

1) Regardless of how effectively the endocrine function of ovaries may be substituted, there is obviously no means of supplying the gametogenic (or ovum producing) function. Accordingly these individuals, regardless of the degree of sexual development attained and the cyclicity of artificially induced uterine bleeding, remain sterile.

2) Replacement therapy yields essentially temporary results; this is equally true for hypothyroidism, diabetes mellitus and hypoovarianism. When therapy is discontinued, the genital development, which has been effected, disappears for the most part. The expensiveness of the estrogenic principles, the large and frequent intramuscular doses of these required or the employment of repeated implantation of sterile pellets of crystalline hormone and the necessity of carrying out this replacement treatment throughout the entire reproductive period dampens the enthusiasm of the most ardent organotherapeutic and depletes the bank account of the most affluent patient. Flattering brassiéres for the hypomastia, bustles and the services of expert dressmakers for contour illusions are more practical cosmetic approaches. Cheap, orally effective and potent estrogenic substances, such as stilbestrol, if they are proved free from toxic or carcinogenic effects when given over long periods of time, may render the task of supplying replacement therapy less hopeless.

There are certain grounds, however, for advising a limited employment of replacement therapy:

1) Intensive estrogenic therapy may effect epiphyseal closures, if these have not occurred, and, thereby, the overgrowth of the extremities may be curbed.

2) The induction of appreciable degrees of genital growth may alter ovarian responses to gonadotropic therapy and, thereby, permit a complete salvage. Several additional trials of gonadotropic therapy should be made following the induction of some genital growth by estrogens.

3) A limited trial of estrogenic therapy may put the patient's mind at ease by convincing her of the shortcomings, onerousness and expense of the therapy.

Briefly the dosage requirements and régime for substitutional therapy designed to effect sexual maturation are as follows: Estradiol benzoate[2] or estradiol dipropionate[2] is given intramuscularly in doses of 1 to 2.5 mg. (6,000 to 15,000 rat units) every two or three days. Signs of possible renal damage should be watched for by repeated urinalysis. Therapy will be limited by the loss of enthusiasm of doctor or patient or by the induction of satisfactory sexual maturation. When this has been obtained, if there is desire to continue therapy further, smaller doses may be found possible and it is advisable to give treatment in a cyclic fashion to stimulate nature's method. The use of cyclic estrogen-progesterone therapy, to be described later, is recommended.

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[2] Commercial preparations of estradiol benzoate include progynon-B (Schering Corp.) and ben-ovocylin (Ciba). Estradiol dipropionate may be obtained as di-ovocylin (Ciba).

If the treatment of hypomastia is the primary problem the use of an estrogenic ointment, made of a lanolin-petrolatum base and containing 0.5 mg. of estradiol benzoate to 4 grams of ointment (3,000 rat units to each drachm of ointment) may be employed. Four grams (one drachm) of ointment is massaged thoroughly into each mammary region upon retiring each night. The primary effects of this type of therapy are local although some general effects occur.

Ovarian failure occurring in the adult during the reproductive period results most commonly from 5 general causes: 1) inanition from inadequate diet or cachexia from acute or chronic illnesses; 2) hypothyroidism; 3) intrinsic ovarian failure; 4) endometriopathic factors; and 5) pituitary deficiency.

The nature of the therapy of the first two classes is self evident. If in doubt, it is always wise to give women with ovarian failure a thorough trial of thyroid therapy.

The same limitations and shortcomings of substitutional therapy for intrinsic ovarian failure discussed for adolescent failure apply here. Frequently this type of failure in the adult is due to a premature climacteric. Some workers have found low-dosage irradiation of the pituitary and ovaries of definite benefit particularly in patients whose failure is characterized by amenorrhea. The effect is probably due to destruction of follicular cysts in the ovaries and, perhaps, also to alterative effects on pituitary function. We have been fearful of this type of therapy, lest the already present ovarian failure be augmented.

We have found the cyclic employment of estrogens and progesterone to be of value in certain patients, whose ovarian failure has been related to endometriopathic factors (endometrial inadequacy). This treatment likewise has been found to be of distinct advantage in the conservative symptomatic regulation and control of bleeding in instances of functional meno-metrorrhagia after preliminary hemostasis has been obtained by estrogenic therapy or by curettage. The details of cyclic estrogen-progesterone therapy are as follows: Several initial series of the following order are given: Estradiol benzoate, 0.3 mg. (2,000 rat units), is given intramuscularly every other day for 10 days, beginning treatment immediately at the conclusion of menstruation; estradiol benzoate, 0.3 mg. (2,000 rat units) and progesterone[3], 5 mg., are given every other day for 10 days, directly following the antecedent estrogenic therapy; treatment is discontinued when bleeding begins and is resumed when bleeding ceases. After several series of this type of therapy have been given, additional cyclic therapy of the following order is given: Estradiol benzoate, 0.3 mg. (2,000 rat units) and progesterone, 5 mg., are given intramuscularly every other day for 10 days, beginning therapy 10 days after the cessation of menstruation; treatment is discontinued when bleeding occurs; treatments are continued until the endometrium, sampled by biopsies, shows a good progestational response at the onset of an episode of bleeding. All treatment is then discontinued and the endometrial response of the patient at the next episode of bleeding is sampled; if this then, in the absence of any immediate antecedent therapy, shows a progestational response, it is assumed that therapeutic salvage of ovarian function has been secured.

Patients suspected of having pituitary deficiency as the basis for their ovarian failure are treated by a system of one-two cyclic gonadotropic therapy. Preliminary skin testing for possible allergy is done before using equine gonadotropin (See footnote 3 for the commercial preparations of this). The details of this system of therapy are as follows: Equine gonadotropin in daily intramuscular doses of 400 to 800 international units is given for 10 days, therapy beginning at the end of menstruation (during this part of therapy several bimanual examinations should be done to be sure that no untoward cystic changes occur in the ovaries); immediately following the conclusion of the equine gonadotropic therapy, chorionic gonadotropin[4] in daily intramuscular doses of 500 to 1,000 international units is given for the next 10 days; therapy is discontinued when bleeding begins.

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[3] 3. Progesterone may be secured commercially as proluton (Schering Corp.), progestin (Lilly), or lutocylin (Ciba).

[4] 4. Chorionic gonadotropin is available commercially as APL (Ayerst, McKenna & Harrison), antuitrin-S (Parke, Davis Co.) and follutein (Squibb).

An endometrial biopsy is done at the onset of bleeding. If a progestational response is encountered, the assumption is warranted that a normal ovarian response has been induced by therapy. If ovaries are receptive, a positive response has been obtained, no further therapy is given until the endometrial response at the next episode of bleeding (preceded by a cycle of no therapy) is sampled. If a progestational response is obtained at this time, it is assumed that the ovaries have resumed normal spontaneous cycles.

Patients who yield positive responses during therapy but not after discontinuation of therapy are given from time to time a series of therapy, followed by one or two months of no treatment, and attempts are made to secure a pregnancy. Pregnancies secured by this form of therapy are apt to be aborted due to intercurrent ovarian failure. Patients under these conditions should be treated as though they had had previous repeated abortions; ovarian substitutional therapy with estrogens and progesterone should be given during the course of pregnancy.

Patients who do not respond to the first series of cyclic gonadotropic therapy are given another similar series. If they do not respond to this, it is assumed that no pituitary deficiency exists as the cause of their ovarian failure.

A differential diagnosis between patients of classes 3 to 5 (those with intrinsic ovarian failure, those with endometriopathic disturbances and those with pituitary failure) is often impossible. It is, therefore, often necessary to give them a trial of cyclic estrogen-progesterone therapy and of one-two cyclic gonadotropic therapy. Reactors to cyclic estrogen-progesterone therapy are assumed to have had an endometriopathic basis for their ovarian failure. Reactors to one-two cyclic gonadotropic therapy are assumed to have had pituitary failure. Those who fail to respond to either form of therapy are assumed to have intrinsic ovarian failure.

A few general statements regarding *ovarian failure of the climacteric* are added for the sake of completeness and because premature climacteric failure may be confounded with other types of failure. The ovarian failure of the climacteric is due to intrinsic decadence of the ovary; it is as physiologic as old age itself. Any attempts to restore normal ovarian responses will fail because of the intrinsic refractivity of these ovaries.

The attitude of teaching the woman to accept this ovarian failure, and its sequelae, as a normal physiologic affair is far safer, saner and more helpful therapeutics than a rather general habit in some parts of the country of plying them with as much intensive estrogenic therapy as their finances permit. We have seen dire complications from this contra-physiologic practice, including marked psychiatric disturbances, uterine hemorrhage, dermatitis and generalized edema. Often mild sedation, a better hygiene of life and reassurance, founded upon the findings from a complete physical examination are all the attention the climacteric woman needs. Small doses of estrogens by mouth over a relatively short period of time may give grateful amelioration of symptoms without interfering with nature's program of sexual regression.

One other statement seems pertinent. Under no circumstances should genital hemorrhage (intermenstrual spotting, menorrhagia, metrorrhagia) of the women of climacteric age may be compromised with by the symptomatic employment of endocrine principles. Time and time again we have seen such procrastination permit uterine malignancy to pass undiagnosed until it became inoperable. Every climacteric woman with these symptoms should be assumed to have fundal carcinoma until its existence has been ruled out by diagnostic curettage.

SUMMARY

1. Any rational approach to the therapeutic induction of normal ovarian responses in patients with ovarian failure must be founded upon secure diagnostic data regarding the nature and degree of the ovarian failure, as well as upon knowledge of the exciting causes of this failure.

2. The symptomatology of ovarian failure has been discussed and criteria have been established for its diagnosis.

3. The causes of ovarian failure have been classified and the modus operandi of their effects upon ovarian function has been described.

4. Emphasis has been placed upon the fact that the cause of ovarian failure conditions the prognosis for salvage of physiologic functions and defines the therapeutic procedures to be employed.

5. The aim of all complete therapy of ovarian failure has been taken to be the initiation of or the restoration of fertile cycles.

6. The limitations imposed by certain types of ovarian failure and by therapeutic measures available at present have been discussed.

7. The necessity for therapeutic tests of ovarian responsiveness to gonadotropic therapy and endometrial responsiveness to estrogen-progesterone therapy has been described and the details for these tests of therapy have been outlined.

8. The conclusion is warranted that various judiciously selected therapies, defined by the exciting causes of ovarian failure, are capable of initiating or restoring normal physiologic ovarian responses in many women with ovarian failure.

A Cooperative Program of Maternity and Infant Hygiene*

W. E. NOBLIN, JR., M.D.
Jackson, Miss.

When I was asked to present a paper on this program, I was happy of the opportunity to talk on a subject that I feel should have a place on every medical and public health program.

I feel sure that most of you will agree with me that through a coöperative program, an enormous amount of effective and productive work could be accomplished in maternal and infant hygiene.

Much has been accomplished and is being accomplished, but there are still many obstetrical cases without proper prenatal and postnatal care and some with no medical care at all. Think what is being done in the diagnosis and treatment of tuberculosis, pneumonia and syphilis in this state through a coöperative program of medical, social and public health authorities.

Ordinary routine prenatal and postnatal care as practiced in the majority of cases must be broadened to include a more complete diagnosis and competent treatment. That is—

1. Careful and complete history
   Past, present, familial and obstetrical.
2. Complete blood study
   To include blood Wassermann (false negative reactions) W.B.C., R.B.C., Hbg. and other serological studies as indicated (blood chemistry)
   Pregnancy anemias
   1. Occurrence (normal levels)
   2. Severity (5% true anemias)
   3. Treatment
   4. Prognosis (Predisposes to intra- and post-partum hemorrhage and infection)
3. Urine examination—albumen
   Diabetics (50% of infants born of diabetics die at birth or in early infancy.)
   Blood chemistry necessary in some cases of low kidney threshold to show presence of sugar not shown at times on urine examination.
4. Blood pressure studies—beginning eclampsias
5. Pelvic measurements—diagnosis, type, prognosis
6. Diet—mineral requirements, calcium, vitamin essentials, including vitamin K. Guard against use of expression, "just eat a regular diet."
7. X-ray studies of selected cases.
   (a) Borderline pelvis
   (b) Primipara
   (c) Multiple pregnancies
   (d) Disproportions (hydrocephalic, etc.)
   (e) Studies of newborn.
8. Miscellaneous: Clothes, massage, breast, exercise, habits—division.

Surgical and medical complications which might be of consequence to a patient during labor usually make themselves manifest sometime during her pregnancy and before labor was begun. Consequently, it is usually possible to make preparations for meeting the physical strain of labor in accordance with the necessities of the intercurrent disease from which the woman is suffering. Infrequently, the onset of labor or its completion precipitates some unsuspected condition or discloses some physical defect not previously diagnosed by a competent obstetrician.

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*Read before the seventy-third annual session of the Mississippi State Medical Meeting, Jackson, Miss., May, 1940.

It is a good general rule that any acute surgical condition which would make necessary an operation during ordinary life finds the demand for operation doubly urgent during pregnancy. During pregnancy, diagnosis and operation are necessary much earlier than usual in order to avoid the havoc that could be created at this time by any degree of peritonitis.

Early diagnosis does not hold for all medical conditions; with syphilis, for example, the diagnosis is much more difficult and less accurate during pregnancy than at any other time.

By recognition and early diagnosis of obstetrical difficulties that will probably require hospitalization, these cases can come to term with a much better prognosis due to proper obstetrical care in proper surroundings.

The maternal mortality rate is higher in urban hospitals from accidents of childbirth than the state rate, showing these hospitals must check more closely on operative procedures.

In rural districts, the maternal mortality rate is higher from toxemias, showing lack of early preventive prenatal care.

Through a coöperative program, these cases can be properly handled, thereby reducing the high maternal and infant mortality rate associated with obstetrical difficulties or surgical procedures.

Postpartum care is of the utmost importance and through a coöperative program, this phase can be handled much easier and more efficiently. An approved routine, including instructions concerning rest, diet, elimination, sterile care, visitors and a special list of instructions concerning breast feeding, should be followed.

SLIDES

1. Postpartum Care.
2. Breast Feeding.

POSTPARTUM CARE

1. Visitors must be limited in number and in length of stay.
2. A twenty-four-hour period of complete rest, with fluid diet, should be enforced, even after the least distressing delivery.
3. A tight abdominal binder should be kept in place during this period and then removed.
4. Elevation of head of the bed on second day, during meals and when baby is nursing.
5. Normal diet with additional milk at ten P.M.—no other nourishment, except fluids, between meals.
6. Mineral oil, one to two ozs. daily, an enema on the second day if necessary.
7. Perineal care by pitcher douches, augmented by green soap, in cases of episiotomy or perineal tear. Allow to dry after each irrigation or douche, and expose to dry heat from lamp, if available, with application of five per cent mercurochrome to the wound. (Plain No. 1 catgut instead of chromic No. 2 is less painful and holds up as well).

BREAST FEEDING

Breast feeding is of great importance to any program of puerperal care. A summary of practical considerations follow.

1. Adequate nutrition during pregnancy, generous use of brown cereals and dairy products without excessive concern for weight gain.
2. Psychological preparation; the expectant mother to be educated to a strong desire to nurse her baby.
3. Preparation of breast, attention throughout antenatal months to accomplish erection and toughening of the nipples.
4. Competent management of labor and delivery; shock to be minimized.
5. Efficient treatment of anemias if present before and after delivery.
6. Excitement to be minimized and rest to be encouraged during the entire puerperium.
7. Management of the newborn to insure vigor of suckling, formula feeding to be limited to the second and third day, or eliminated altogether.

Advice concerning these matters may well be noted in a brief letter to be given the patient when she leaves the hospital, with particular emphasis on the importance of returning to her doctor in six weeks for an examination.

Advice concerning these matters may well be noted in a brief letter to be given the patient when she leaves the hospital or following delivery in the home, as the case may be. with special emphasis placed on an examination in six weeks by the attending physician, or if the case was handled by a midwife, by a physician competent to make this final examination.

To promote such a coöperative program, I feel there are two essential points that must be developed.

1. Regular obstetrical conferences for doc-

tors and nurses interested in and doing obstetrics, in which obstetrical problems are discussed and the best solutions determined.

2. Routine for complete prenatal and postnatal care. Under this point, I should like to mention postgraduate training of physicians and public health nurses in obstetrics as is being done in Pike County, Mississippi, in the excellent program of obstetrical nursing care being carried on in this county under the able direction of Dr. Paul Haney. They are doing a marvelous piece of work and I hope their program will spread to many other counties. This type of training will enable nurses(I mention nurses particularly, for they are the ones that see so many cases more often than the doctor) to recognize and bring to the attention of the attending physician or health officer these abnormal and needy cases so that they might receive the care and treatment they require, either through local maternity centers, auxiliaries. charity or private hospitals or members of the local medical societies. This postgraduate training is an essential part of a coöperative program, particularly in a rural state where so many cases do not come to the attention of a doctor until they have actually started in labor. Of course, the aim of the health departments is to get these cases early and get them under a physician's care, but this is not always possible.

I am of the opinion that there should be one central organization in each community to do maternal and infant hygiene work, rather than two set-ups, one for mothers and one for babies, reducing operating cost, etc., and increasing the efficiency by eliminating the old "passing the buck" program. There must be a closer working relation between public health and social welfare as brought out in a talk made here recently by Dr. Perkins of Tulane. In cities where there are located charity hospitals, these indigent obstetrical problems should be handled there by the hospital staff, and in the rural areas, the problem can be worked out as stated above, through the midwife, nurse, doctor procedure.

I have been told that there are available federal funds for such an organization when completed, that will function as outlined above. With this help with a coöperative working arrangement among medical, public health and social organizations, we will be able to carry this work into other parts of the country and improve the work being done in the areas already reached.

	T	White	Colored
BIRTH RATE			
1921—	25.6	27.3	24.1
1938—	23.8	20.7	27.0
MATERNAL MORTALITY			
	5.9	4.6	6.8
	9.5	7.1	12.0
INFANT MORTALITY			
	68	53	85
	56	50	62

Per 1000.

DISCUSSIONS

Dr. J. E. Wadlington (Belzoni): Maternal and infant care in the state of Mississippi has progressed wonderfully. When I first started to practice, I was located in a community that had a full-time health unit, an old established unit from the very start with the help of the Commonwealth, the state and the county. It was taken just as a matter of fact that these cases were looked after, especially in the colored division. The midwives were trained and given their routine care of patients. Later I had the pleasure of going up to Trenton, Tennessee. We had a full-time Commonwealth outline up there for the care of maternity and infant hygiene. It was carried out with the coöperation of the doctors of the town, and due to the fact that back home the general practitioner and public health group did not get on as well as they should, I was interested to see how these doctors took the program. It was something like the set-up in Pike County. The patients were the lower strata of life, who did not have finances to seek private medical care. These patients were seen by the public health nurse and specimens were brought in to the private doctor. All those cases that showed any sign of toxemia or albumen in the specimens or Wassermanns were turned over to these private physicians, and they all took to it like ducks to the water. It was a great responsibility off their shoulders, and, of course, it has become just a routine with us. The coöperation that the nurses gave the doctors impressed me very much.

Then later I went to a county in the state of Mississippi that does not have a full-time health unit. Well, it was such a let-down that it scared me, even the communicable diseases that I saw in schools, epidemics of diphtheria, of measles, mumps and whooping cough. We had a lot of midwives that were up around 70 and 80 years old, and in one instance when I first went to this town, about the second case I had, there was a baby half delivered. This midwife had been sitting there about two days, trying to get that baby born, when a little help in lifting the shoulders out delivered it. Those old women through the request of the State Board of Health Department have been done away with, and just a few weeks ago, showing the coöperation of the State Health Department in training their midwives, I had a colored midwife to call me at her own expense from down in the piney woods and she told me she had a woman who was swelled all over, and she was a holy roller and would not go to a doctor. I sent the note on into the State Health Department, and this mother came on in regardless of religion and died. Her blood pressure was over 200, she had marked albumen, and she was put under treatment. I later understood that she would not take any treatment, and the midwife said she had a miscarriage.

We need more help from these people than we realize. The doctors in general can carry out this program much better because the average lay person has very little to do with the health of his community, the biggest portion of it being politics to get the board of supervisors to give financial help. We have tried for about three years to get this through in my county, and yet have failed. We are just having a high death rate in infant mortality and in maternal cases, also due to the poor program we have in this county and you can compare it with the county adjoining that has a full-time program, and their infant and maternity rates are far superior to ours.

I appreciate Dr. Noblin's paper, and I hope with all sincerity that some day we will have a program that we can carry out according to the Pike County health program.

Dr. Felix J. Underwood (Jackson): This program was first taken up with the local medical group for endorsement, and it had the endorsement of the local medical society and two nurses have been on duty constantly, day and night call for those physicians of the county desiring such service for their patients, unable to have a nursing service. It has worked out very well indeed in the Pike County area; the physicians are very happy about it, and the people as well.

Those nurses visit cases where physicians want them to, and practically every physician in Pike County has asked for the service. They are very enthusiastic about it, and they even want the service to be extended into the hospitals of the county,—that is the nursing service for those persons unable to employ a nurse. As yet we have not seen our way clear to do that, but it has worked out well to the entire satisfaction of the entire medical group, and I believe any medical group would be happy to have that service when they are called out on these cases and preparation has been made, a nurse there ready to wait on them and look after the patient according to his direction. I may also state that nurses before entering this service are given six months' special training in the Chicago Lying-In Hospital before they go into this particular activity. They are specially trained.

Dr. W. E. Noblin, Jr. (closing): I appreciate very much the remarks of Dr. Wadlington and Dr. Underwood. I would love to see this meeting go on record as having approved more of these units being established, more of this nursing service brought to us, and a more extensive postgraduate training in obstetrics.

The Selective Service System*

RICHARD H. EANES, LT. CD. M.C.
CAMP SHELBY, MISS.

FOR THE first time in the history of this nation it became necessary for Congress and the President to give to us in 1940 an act to provide enforced military service in time of peace. The Act contemplates the training for a period of a year the physically fit manhood that can be brought rapidly into an intensive training schedule. The Act is purely a defense one and so long as the status quo is maintained, it is contemplated that our present schedule of 1,400,000 men in the Army will be sufficient. It is felt that the time is too short and the task too great to spend time and labor on any except the best men available. This point has been missed by some of our people. The feeling comes to all of us sometimes that the Army is so big that there should be jobs for all sorts of men, and that places can be found for those that we see refused who are apparently fully able to fill some kind of place. True, the Army is large and there are all sorts of places within its ranks, but for the present only those most fit for general military duty are wanted. The regulations provide that those who do not meet fully the physical requirements of general military service, but who are fit for some service, be placed in a special class, I-B. They are not lost, but are held in this special class until the need is greater. The time may come when we will need them every one. They may then be inducted and will be assigned where they can best serve. They are fit for limited military service.

There is demand that these I-B men should be inducted; that they be given treatment for their remediable defects either before induction or by the Army after induction. The thought admittedly merits consideration, but you must bear in mind that the task now in hand is a stupendous one and that to attempt treatment of these men would mean much immediate additional work. In the emergency of 1917-18, these men were inducted. They were assigned to work which they could perform and corrective measures were applied to their remediable conditions when practicable. We may eventually come to this but for the present the task in hand is all-engaging.

Perhaps it is well that we define what we mean by general military duty. By the term, we mean that when one is fit for such duty, he is able to do any service that he may be called upon to perform; to march with a pack for twenty miles and at the end of the march to engage in a battle, if necessary; to live in barracks with his fellow soldiers caring for himself, and as conducting his barracks life that he is not objectionable to his fellows; to live, if necessary, in camp under trying and uncomfortable conditions without undue complaint of the heat, the cold, or other annoying conditions and ready at all times to respond in a soldierly manner to the demands that may be placed upon him. I believe you will agree that the order is not small, and that the necessity for great care in selecting such men is apparent.

It is for the Army that we are procuring men which, therefore, sets the physical standards to be met by the inductees. Selective Service incorporated M. R. 1-9, the Army's standards of physical fitness, into its regulations but the standards as prescribed belong wholly to the Army. We cannot change them. Selective Service has, however, the privilege for suggesting changes to the Army if they seem desirable. I can assure you that there are a number of changes under consideration at present, in addition to more liberalized interpretations such as those published recently by the Army in its Surgeon General's Circular Letter No. 26, relative to dental conditions. This particular liberalization is included in Medical Circular No. 2 (dental) from Selective Service which you who are interested will receive in the near future.

Naturally, your greatest interest centers about the question, "What has the operation of Selective Service revealed to us in reference to the physical condition of the nation?" This question is one that we should answer as soon as possible but no detailed answer is yet available. The occasion for applying the measuring rod is again with us. We must make the most of this opportunity and face whatever it reveals. The physical requirements of this emergency are not very different from these used in 1917-1918 and the results can be compared in many respects without discrepancies. We are now requiring some new evidence, serology, on all examinees and, as far as possible, x-rays of the chest.

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*Read before the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 15, 1941.

The figures to date are running almost constant since the beginning of computation. The local boards are finding about sixty-eight per cent fit for general military duty and then induction stations are turning back a little more than thirteen per cent. Of the thirty-two per cent turned down by the local boards, about twenty per cent are rejected for all military duty while twelve per cent are placed in Class I-B. This means that only sixty per cent out of each hundred physically examined by the local board finally get into the Army. There is no figure yet available from the Army to show what percentage of inductees is being discharged on certificates of disability for conditions existing prior to induction. That will come later.

Of the conditions which have caused the greatest number of rejections, dental defects lead the list. It is true that our dental standard is high, but since we have prided ourselves in having the best dentists in the world we have supposed that our people were more dental-minded than others. It is felt that with the liberalization of dental requirements as mentioned above, there will be a decrease in dental rejections. Already, there have been inquiries at national headquarters as to what should be done with those rejected earlier for dental conditions, prior to liberalization of interpretation by the Army. Obviously, they should be re-examined and reclassified. If now found to be in I-A, they should be returned to the induction station for induction. Regardless of the liberalization of regulations, the condition of the mouths of the registrants already examined is a challenge to the dentist and the physician alike. Our youths must be taught more and better dental hygiene.

Next after dentistry come cardiovascular diseases as causes for rejection. You may recall that during the last war there were so many cardiovascular rejections that a special committee was formed for the purpose of studying the rejections. Many of those studied were found to be suffering from functional conditions only and hence were inducted. We have come a long way and learned much since that time. No longer is a systolic murmur a thing to cause consternation. Instead, a murmur can be more intelligently differentiated. Attention must always be given to enlargement of the heart and to diastolic murmurs. However, our advice is that, if you must err, do so on the safe side. A man rejected now because of organic heart disease can be easily picked up in the future and, if needed, given opportunity to do his bit. The medical advisory board cardiologist should be called upon freely.

Venereal diseases, in this as in all mobilizations, are playing a major role as cause for rejection. They are being given special prominence at this time because of the serological examinations. In some states, syphilis is running as high as twenty-nine per cent among the negroes and in others as low as twelve per cent. Among the whites two per cent represents an average. On the serology evidence alone and in the absence of demonstrable lesions of the disease, the condition is being diagnosed as latent syphilis. As such, the registrant is not pursuing a most rigid schedule of treatment of syphilis. Only about sixty per cent of these men are receiving treatment. When men have had adequate treatment, they should be inducted. Many of them will never have their serology reversed and therefore adequate treatment should be the criterion for induction. Advice is being given to the effect that the regulations should be so changed. It is hoped that this will be brought about in the near future.

It has happened and no doubt will happen again that a man contracting syphilis and receiving treatment enough to reverse his serology or to clear up all local manifestations chances to be inducted. He, through ignorance or design, fails to inform the Army physicians about his condition. He goes to a mucocutaneous relapse, which represents the most dangerous syphilitic problem from a public health standpoint. It is not only possible but quite probable that he will spread the disease before he is again put under treatment. You, as physicians and health officers, may have it brought to your attention that someone has been inducted whom you know has not received adequate treatment. Since these diseases are reportable, we beg of you to give this information as quickly as possible to the Surgeon of the Corps Area where the man is inducted. This information will then be passed on to the proper surgeon, diagnosis of syphilis will be recorded and treatment given.

Gonorrhea constitutes a real problem in some places. We have been informed by the health officer of one of our largest cities that infection is for sale in that city for the express purpose of evading training and service under the Selective Training and Service Act of 1940. In other places there appear conditions almost approaching an epidemic. Registrants apparently become infected after they are examined at the local boards and before being brought to the induction station. This is especially true in the rural areas of some of the Southern states. The health authorities in these places deny that the infection is for sale, as such, but declare that it comes only as a result of too much unwise celebration in preparation for a prolonged absence from the community. The question has arisen as to the best method of handling cases appearing at the induction station with a brand new acute infection. The Army will not induct them for the purpose of treatment. It seems that there is a procedure which is effective and already operating in certain places. It involves an immediate report by all of Selective Service personnel interested and by all induction station commanders to the respective state health authorities. By this means, the case can be placed under treatment quickly. This is the best practicable solution. With the modern chemotherapy the case can be rendered non-infectious within two or three days and perhaps cured within two weeks. If, after certain tests to prove the cure, it is believed that he has been cured, the selectee can then be re-presented for induction, accompanied by a certificate showing what has been done for him. Many of the states have laws which are designed in such way that they lend themselves to the proper handling of these cases.

Neuro-psychiatric conditions are another source of trouble. Experience from the last war has made us careful. The true psychoses are generally rather easy to discover and eliminate, but the psychopathic personality of one kind or another is a difficulty. There are not sufficient psychiatrists in this country properly to examine the Army now in mobilization. There are only scattered areas where psychiatrists of proper training can be found in sufficient numbers. In the last war psychopaths were discovered prior to induction in all too insufficient numbers. Some were sent overseas to be sent back as soon as they were put under strain or stress. Others were able to go through and return home after the Armistice to be demobilized and fail utterly in making adjustments in civil life. A benevolent Congress saw fit to view their plight in a most sympathetic manner, and today the taxpayers have paid out money in astounding amounts. They are not through yet for these men are still living and many of them still begetting children. In this connection, Dr. Harry Stack Sullivan has been with us as advisor. He and a committee of psychiatrists have prepared for us Medical Circular No. 1 and with its help many practitioners have been able to gain a better insight into the problem. Conditions are improving but they are still far from satisfactory. Dr. Sullivan is preparing additional psychiatric seminars and hopes to contact more doctors interested in Selective Service. In these times the world seems tinged with madness. Because of the insane lust for power on the part of certain megalomaniacs, mental disease is threatening all races. Fear, an acknowledged potent cause of mental disease, with inhuman cruelty, is being employed deliberately and relentlessly to break down morale, to undermine self-reliance and respect, and to destroy courage. As a destructive weapon, fear has proved as potent, even more effective than force, so that it has become the weapon of choice in some of the countries concerned in carrying on the war of nerves. This nation has failed to solve many of the problems that have been before us for the last decade and more, and now we have upon us a problem by far more difficult than any that has gone before. We need all help possible to destroy the ogre, fear, and to put us in the path of straight thinking and action, to keep us from maladjustments, and to help each to find the place where he can best serve. There are personalities that can get on well in civilian life, who, if placed under military discipline and restriction, simply cannot meet the situation. Those personalities are discoverable by the psychiatrist but all of us, whether trained in psychiatry or not, know in our communities youths who have given trouble, not much perhaps, but who have failed to find their rightful adjustment. Do not send them to the Army hoping for their reform. It will not come about and the man will be made worse at a great expense to the government. You know these individuals in your community. You perhaps have known their forebears. It is hard at times to turn them back when you and you alone may be the possessor of all the secrets and facts in the case, but it is for the betterment of all that they be turned back. If there is doubt in your mind, send them a letter of explanation that they may be examined by the psychiatrists on the advisory board or that special attention be given these individuals by the psychiatrists at the induction station.

Some controversy has arisen over feet that are flat. There are certain types of feet that any orthopedist can describe and which will invariably give trouble. These are easily detected and can be readily rejected. However, there are other flat feet which defy even the best orthopedist to determine whether or not they are troublesome. Some of them will never give trouble if belonging to certain types of individuals, but when a part of other personalities who lack sufficient stamina to carry on, the individual makes capital of them to avoid disagreeable tasks or situations and sooner or later will perhaps use them to avoid military service. Many negroes' feet are anatomically flat. These are not necessarily troublesome but they require a certain amount of study and judgment before being passed on to the induction stations.

For the purpose of visualizing for you what we have to do and what we are doing, we shall present a few slides. This first slide shows our general objective. (Analyze first slide).

Objective: Select an Army that will be tops physically, mentally, and morally.

Visualize: One year active service. Ten years reserve.

Visualize: Governmental responsibility from standpoint of:

Insurance

Economic security.

Veterans administration

Lifetime patriotic citizenship.

The second slide shows our procurement objective. This is to be attained from males from 21 to 36 years of age, registered in October 1940, and from those who may be registered at subsequent times. (Analyze second slide).

I. Total population	132,000,000
II. Number of registrants	16,500,000
III. Estimated number to be physically examined in five years	6,600,000
IV. Estimated total number to be inducted in next five years	4,400,000
V. Estimated number to be inducted first year	800,000

Incidentally, it is estimated that more than 6,000,000, or about one-third of these have been classified and about three-fourths of a million have been physically examined. You can see from this that with the present rate of rejections and deferments, we shall not obtain the 4,500,000 men needed from the original registration.

Selective Service has called upon three or more citizens of each community to form boards known as the local board. These boards being familiar with the conditions of the community, and many times knowing the persons to be selected, are above all in best position to judge their neighbors for service in the best interest of the national health, safety and welfare. These local boards have a tremendous responsibility and upon them rests mainly the success or failure of the whole effort. Each local board, as you well know, has attached to it one or more examining physicians, medical or dental, to perform for it the necessary physical examinations. The requirements may seem elementary and non-essential, but I beg of you to bear in mind that all examinations must be on a comparable basis in order that regulations may be uniformly applied and statistics properly interpreted. If, in your opinion, based on the physical examination or from personnel knowledge, you are convinced that a man will make a good soldier in spite of minor physical defects, so state on the Form 200 and advise his classification as I-A.

LOCAL BOARD—ESSENTIALS FOR SUCCESS

1. Complete examination—record entry in each blank, including optionals, pulse, blood pressure.

II. Know, adhere to, administer intelligently all regulations.

III. Avoid extraneous influence, personal, political, and emotional.

IV. Accept or reject *only* if certain, otherwise refer to Medical Advisory Board.

V. Review each record for physical, mental, and moral defects.

A Class I-A man who is selected by the

local board is forwarded by that board to the respective induction station to fill a part of that local board's quota. In the United States as a whole, just a little better than ten per cent of men so forwarded have been turned back by the induction stations as not meeting the requirements for general military service. At a glance and without thinking, this looks as though the local boards, by having turned back from the induction stations one out of ten forwarded, have done a poor job, but not so; there is no reason for criticism when one stops to analyze. We should never expect to get all men to agree on any one point. Doctors must think independently and they will reach different conclusions. If we glance at the next slide we find an analysis of the reasons for a difference between the two examining systems. (Analyze Slide 4).

ANALYSIS OF REASONS FOR REJECTION BY ARMY OF SELECTEES

I. Local Board—Attitude of Personal Interest
  - Desire to fill quota
  - Unfamiliarity with regulations and inexperience
  - Imperfect examination and incomplete record
  - Lack of facilities and personnel
  - Recently acquired disqualifying defects (intentional or accidental)
  - Malingering.

II. Induction Board—Attitude of Army Interest
  - More exacting
  - Experienced (full-time), and rigid
  - Individual board variation
  - Subject to human fallibility
  - Difference in medical judgment.

The local board is activated by a desire to see its community shine in the midst of others; not always has it sufficiently familiarized itself with regulations; it fails to complete its examination record; suffers from lack of proper examining facilities and often the willing doctor is overworked. Examinees seem to insist upon acquiring new conditions, either accidental or intentional after the examination, and in both of these categories we may find venereal diseases. On the other hand is the attitude of the induction board; we find them standing as guardians of the portals of the Army. There the examination is to be so exacting that none may enter those portals except the physically perfect. That is their sole job. These induction board physicians are subject to human fallibility, difference in medical judgment, and they, too, may err. They have more equipment, better facilities, and are supervised by one with experience in physical examination for armed services. It is natural that they should detect defects and turn back men who have passed their local boards. This is not necessarily a conflict but only challenges each party to study and understand the objective of the other, which after all is the common objective—of selecting for the armed forces only the best fitted to serve. It should be fully realized that the examining of men to determine physical fitness for the armed forces is a special branch of medicine; that there are few specialists in this branch; and that such specialists cannot be trained in so short a time since the passage of the Act. Give us time and all will be well.

We shall now approach a subject which is of interest to every one of us. I refer to medical personnel and any of the figures that I may quote have been verified by sources other than medical. There is an over-all shortage of doctors in the country. Distribution is poor. In a few of the larger metropolitan areas there may be a surplus, but in the vast rural areas of the country shortages exist everywhere. Under the present schedule the Army expects to withdraw from the civilian profession 7,900 men. About 3,800 men are needed each year to replace the normal attrition in the profession. There are graduated into the profession each year approximately 5,000 doctors. This leaves us about 1.200 to replace retirements and care for increasing needs. This will leave us with a chronic deficit in civilian life of at least 6,700 doctors. The supply, we are informed, cannot be augmented and we know that this is true during the next five years, for there are just so many pre-medical and medical students now in process of preparation. In these figures, there is no estimation for the increased needs of an expanding Navy, Public Health Service, Veterans Administration, industrial organizations, and demands of Selective Service. It means that this shortage of 6,700 doctors plus those needed by other services must be borne by the nation as a whole. We can see from this that we cannot afford to lose or misuse one single doctor. This fact has been recognized by national headquarters of Selective Service, and on April 30 and May 2, information was furnished to the State Directors of Selective Service emphasizing the seriousness of the situation and stating specifically that national headquarters feels that it is of paramount importance that the supply be maintained.

There is no limit to the number of commissions available to qualified doctors in the Medical Corps Reserve of the Army. The Army is anxious to build up a pool of Medical Reserve Officers which will take care of their needs throughout the emergency. We are informed that they expect to have completely consumed their present pool by October of 1942. It is felt that doctors in the military age who are qualified should secure a commission and prepare to serve their year. The memorandum from national headquarters of Selective Service, issued on May 2, has stated specifically that if a doctor does not do this and is found to be surplus in his community, there can be no excuse for his deferment—to the contrary, he should be inducted when his number comes up. The War Department, as well as all interested parties, concur that the initial or first internship year is a part of the basic medical education. Young doctors who hold reserve commissions are protected from the operation of Selective Service by that commission and it has been stated, as a matter of policy in the War Department, that young doctors holding commissions and serving their initial internship year will not be called to active duty.

Medical students constitute the whole supply of personnel to the profession. They are not being commissioned in the Medical Corps Reserve and are subject to the operations of Selective Service. Group deferment was denied them by the Act and Selective Service is opposed to the Murray Amendment. I shall be glad to state to any of you the reasons for this opposition if you so indicate your desire. In the May 2 memorandum to all State Directors of Selective Service, National Headquarters stated, "It is of paramount importance that the supply be not only maintained but encouraged to grow and that no student or interne be called to military service, before attaining that status."

The responsibility for deferment lies wholly upon the local boards, subject to review by the appeal boards. It is a question of an understanding of the situation by the local boards.

We are hearing in National Headquarters that communities, laboratories, and hospitals are being stripped of their medical workers, internes, and residents by such reserve officers being ordered into active military service by the Army. Unquestionably, this is being done to a certain extent, but it is our impression that if a community will make proper representation to the Corps Area Commander, time will be given for some arrangement to be made. In the laboratories and hospitals it will be necessary that older men who have earned a retirement to be enjoyed in normal times will be obliged to return to labor and replace the reserve officers who are called to military service. These are not normal times—an emergency exists. Each of us must serve where he can function to the best advantage in national defense.

The condition existing in the medical profession likewise exists among the dentists. Selective Service has not yet taken so strong a position on dental students as on medical students, but the need is recognized and a definite statement will be forthcoming in the future. There are Dental Reserve Officers sufficient to meet the immediate needs of the Army. Dentists may request deferment, which, if denied them, they can appeal. If, upon appeal, deferment is denied and they are inducted, it is understood they may be commissioned in the Dental Corps Reserve upon application, if they meet the required qualifications.

We, in Washington, have seen no difficulty or controversy that we feel cannot be settled by an understanding between all parties concerned. The success of the Selective Service System depends upon the wholehearted coöperation of the citizens of this great democracy. There are, of course, rough places to traverse and at times some faint-hearted among us may become discouraged, but our experiences in the past have taught us to persevere and success will be ours.

Station Hospital.

The Challenge To Medicine*

W. H. ANDERSON, M.D.
BOONEVILLE, MISS.

If I were a devotee of the drama and were not moved by the profound part played by medicine since man has learned to override death and human suffering, if I were a lover of romance and were not fascinated by the unfolding story of life made longer and more abundant, if I were a zealot for social improvement and did not burn with the sacrifices and triumphs of those who have discovered medical truths, or if I were an economist and could not estimate the blessings of medical science—I would be as one without vision or light. Indeed, if I were a theologian and were not persuaded that the soul of medicine was permitted to share with Divinity, I would fail to perceive the mission of the Son of Man to earth.

What we call medical ethics was founded on love for the life of another as much as for one's self. Likewise, medical science has grown and served best in the democratic way of life, in its zeal to perfect the human organism. It is proud of its curative and preventive progress, its conquest over pain with anesthesia, its triumph with surgery that removes disease and gives back a sound body; but its heart ever yearns for the perfect whole, a body with every organ in harmony down to the minutest cell. It wants a body great in volume, strong in physical endurance, gigantic in mental stamina, towering in moral courage, adjustable to society, and able to carry on to the end like the "one-hoss shay." No matter how skilled a surgeon or how replete his armamentarium, the true physician does not live who would not rejoice to find the man who can make life's journey without infectious encounter or mark of the surgeon's scar.

Rapid has been the advance of medical science, its unlimited sphere admits still greater triumphs ahead. Uncertainties accruing with the present world upheaval and threats to the sanctity of the doctor-patient relationship should be a challenge to every doctor to turn the limelight on himself for personal stocktaking. After all that has been provided for him, is he doing the best he can to meet the responsibilities he has assumed? Has he visualized the relation of social, economic and emotional influences to the health of the individual and to the strength of the nation? If he would broaden the base of medicine, he must see the problems of the group as a whole and accept leadership in solving them.

The doctors of Mississippi have a special challenge in meeting the medical needs of our people. We have fifteen per cent less doctors than we had fifty years ago and our population is doubled. The average per population for the nation is about half this number, plus a higher age level for Mississippi doctors. We have the lowest number of general hospital beds of any state in the Union, with only fifty-four per cent occupancy as compared to seventy per cent for the entire nation. We have a death rate of 15 per thousand for our colored, who constitute half our population, as compared with the national percentage of 11.2. A survey of incomes reveals that the average farm family has an annual cash income of less than $200.00; and our public school teachers average $10.23 per week. The amount spent on Mississippi school children ranks high in proportion to our income, but is below half the average for the nation; and twice as many children are born to the white women of our rural sections as are born to women in the industrial states of the North and East.

In the face of these facts some say that no more doctors are needed, that our poeple are receiving better medical care than ever before. This is true in part. One doctor can see more patients than he could fifty years ago, but on the other hand people are becoming more health conscious and their demands have multiplied many times. In case of an epidemic, the doctors we now have in the state could not take care of the people. The draft is reducing our ranks still more. We laugh at the ostrich for putting his head under the sand and thinking his body is hidden; but it is just as stupid to say that all of our people are receiving all the medical advice and care they need or can use.

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*President's Address delivered before the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 13, 1941.

To meet the shortage of doctors, the first thought on the part of many would be to lower the standards so that the handle of the diploma mill could be turned more rapidly. This would be tragic. A high type of citizen and a broadly educated man, in addition to thorough medical training, is demanded by the public. The kind of men selected by the medical schools might make quite a difference in the grade and the amount of medical service delivered to the masses. There is a great challenge to our medical schools to select young men who are suited in mind, soul, and heart to carry medical service wherever it is needed.

A more even distribution of doctors might serve a great purpose this time. Decentralization is the trend in industry and in education. Our military strength will be made stronger by a general decentralization process. Scientific farming is being carried out to the plow handles, home science to the cooking stove, and medical service must go to the arsenals of supply of man-power in the rural communities and small towns.

Public health can and is doing much to meet the medical needs of the people. It is finding its way to the rural communities, carrying health education. At this time it deserves liberal support.

The small hospitals throughout our state, building around them little medical centers, constitute a great means in carrying more and better medicine to the masses. The extension courses being given in our state at these little hospitals are serving a great purpose. They are bringing the latest in medicine to our busy doctors who are trying to hold the lines on the fronts of medicine. These instructors will also see and understand better the medical needs of the masses and the conditions under which the practitioner labors, which will be reflected back in their teaching of the medical student. The small hospital and the well-equipped clinic enable our doctors to see many more patients and to serve them much better than in years past. We are very proud of the type of service our doctors are giving. Our per capita distribution of funds for the indigent sick is a most noble gesture to rural medicine. It would seem that government grants may be necessary for treatment of indigents and near indigent in some sections. The fourteen and one-half cents appropriation per person for the indigent needs to be increased. Federal aid it would seem must come to our rescue to augment our state funds. Philanthropy and church organizations can also help.

Coöperative medicine can increase its output and improve its quality. Coöperation of doctors one with the other, coöperation of doctors, dentists, pharmacists and nurses, all of whom really constitute the medical profession, paves the way for progressive service and better understanding from the people. The medical profession and the laity must understand each other better lest both suffer. The laity should know that the study of medicine is very expensive from a financial standpoint, that it takes some brains to start with, and that in the practice of the art there is hard work and strain. The profession should know that the laity have been very heavy investors in hospitals and that governmental, philanthropic and other public sources have provided a capital investment in facilities for medical care amounting to $23,000 for each physician. We should like to see in some county seat where all the doctors of the county are located, a hospital and a medical arts building combined in one. In the office building there may be space for every doctor and every dentist in town, for a pharmacist, and for the all-time health unit, room for a library and motion pictures to educate the folk while they wait. One laboratory and one general waiting room will suffice for all. The nurses may circulate in the doctors' offices, while one business manager takes care of the finances, and one hostess greets the patients and directs them to their doctor. This entire plant may be financed by the county and the office rent from the doctors may offset the cost of the public health unit and charity.

It is not enough for us to treat the individual patient for his individual ailment, for we need to deal with medical problems. The cancer problem is one of our most difficult to conquer. Deaths from cancer are on the increase. The way to victory over it is not yet clear. But early diagnosis and early operation or irradiation are our most effective means at present. A disease so deadly and with such general distribution challenges the entire medical profession from the consultants in the specialties to the private practitioners in the rural communities. However, before the medical profession can do its part the general public must be made cancer conscious. Some splendid work has been done in this field this year. But to the general practitioner we should like to suggest the aid of a trained nurse. We should like to offer the slogan, "For every practitioner a trained nurse, and for every female office patient between the ages of 35 and 55 a pelvic and breast examination." You have read the story of acres of diamonds in the back yard. We believe that a well trained and broadly educated nurse can discover acres of diamonds in the office of many practitioners. She could help him modernize his service to keep step with progress in other fields, help to sell him to the public at a price more in keeping with his real value, and impart valuable health information to his clientele. In our state the trained nurse can be of special aid to the general practitioner in the field of obstetrics and pediatrics. With the aid of the trained nurse the practitioner can do much more work that the public needs, a better grade of work, and can serve it in a much more palatable and pleasing form, all at an increased cash income to himself.

Another problem which still challenges the profession is appendicitis, which we have with us every day. No medication, early diagnosis and early operation are the means by which the death rate may be lowered. Dr. Time is thus far the most successful surgeon who has operated for this disease. Again education of the laity is imperative. By word of mouth from the doctor and by the lay press, especially the country weekly, the masses must be taught that a pain in the abdomen that lasts for one hour without a let-up, should be counted appendicitis until the physician can prove it otherwise and they must be instructed to abstain from purgatives until ordered by the physician. Another important requirement is for hospital beds to be near at hand and available without delay. It is safer to have an operation for appendicitis in a six-bed hospital within six hours of the onset by a general country surgeon than to be operated on by the ablest specialist in the largest hospital in the world three days later. With the increase of worthy and well-qualified surgeons and the number of hospitals in our state supported by the per capita distribution of funds we should rapidly lower the death rate for appendicitis.

The suicide problem is certainly one in which the profession should feel a keen interest. The The annual death rate for suicide exceeds that of appendicitis by about five thousand. The person who takes his own life is mentally sick. He needs medical advice and treatment, encouragement and sympathy, and oftentimes social guidance and financial aid. To him the medical profession has a responsibility and it could activate its soul life by being his good shepherd.

The aged, if we are to continue to have old people, deserve more consideration at the hands of the profession. Geriatrics is a field for specialization that would pay good returns. We are too prone to pass up the man of seventy or above and ascribe his ills to his age. Age is not really a matter of years and if a man keeps mentally and physically fit he should be worth more to human society each day that he lives even if he has a hundred birthdays. The father of modern clinical medicine jocundly advised chloroforming at sixty, but failed to have the remedy applied to himself even many years later. Hippocrates, the father of medicine, lived to be 103, and the world's soundest financier, John D. Rockefeller, only missed a century by two years. An old red mule on the farm was used just for the planter from 30 to 35 years of age. Her pulling was very steady and she could make the distance between two points with few steps. A veteran old coon dog was left at home during hunts by the younger generation after he reached fifteen years. He howled pitifully, but to no avail. One day the father ordered that the cutting of fine board trees for flying squirrels must stop. After a chimney corner consultation by the boys, the old dog's pot liquor, mush, and eggs were increased and he was carried on the hunts led by a rope until the enthusiastic young breed treed. He was then loosed to apply his coon dog wisdom. The results were the catching of more coons and the saving of many valuable board trees. The moral applies to both profession and laity.

The major challenge to the medical profession is the alcohol problem. The cost of alcohol in money, in mental and physical efficiency, in moral stamina and in soul power is more than this nation or any other is able to carry at this time. The money cost in this country is $150.00 for every family. Just suppose we had this amount for hospitals and doctor's bills? Some people can take whiskey in moderation apparently without much damage. They seem to have, as some one put it, good blood-brain barriers, but the majority are allergic to the elixir of corn. The American Medical Association committee on motor vehicle accidents concluded that if a person has .15 of one per cent of alcohol in the blood that he is fifty-five times more likely to have a serious accident driving a car out on the highway than one who does not have any. In round numbers we have 100,000 accidental deaths annually and nine million injured. Forty thousand deaths occur annually on our highways. Even the deaths in London now from bombs are not equal to the accidental deaths from automobile accidents before the war. The saving of 20,000 lives, many of them at their most productive age, and multiplied thousands of injuries is a challenge that this profession cannot ignore. We feel positive that not only half our highway deaths can be charged to whiskey, but that one-half of our murders, our suicides, and our venereal disease can be charged to John Barleycorn. The consumption of alcohol as a beverage is definitely incompatible with the machine age in which we live.

We feel great pride in the reduced death rate in recent years from diphtheria, typhoid, colitis, tuberculosis, childbed fever and infant mortality. These accomplishments, largely through vaccination, sanitation, and asepsis, constitute a thrilling story in medical achievement. But in relation to volume of life, mental health and physical vigor, food deficiency seems to be playing an important role. The vitamin bill amounts to $90,000,000 per year from the drug and department stores. The doctor of the future will need to consult the agronomist so as to be able to advise his farmer client properly on vitamin production. We felt mighty sorry for King Nebuchadnezzar when he was turned out in the pastures to eat grass. The Scripture advises that he came back invigorated in mind and body. We know now that vitamins were the answer. We have just been a few hundred years behind. For our vitamins we are right now ready to say, "Pass the grass." The grass on the lawn may prove a nice income. It is no longer an insult to tell a man to go to grass. It may be that the country doctor who has been out in the pasture with the people is to become the advanced guard in the field of medical dietetics.

While we are girding ourselves for war, we are hoping for peace. No profession on earth can be a greater force for lasting peace than ours if it puts its hand to the task. The soul of medicine abhors pain, but it loves peace. Its war eternal is against human pain and suffering. In the distance the profession can assist permanent peace by helping children to select peace-loving ancestors aforehand. A colored friend of ours said he got along fine with his fourth wife because she was a better conditioned negro than the other three. At one of the large serum-producing farms we became interested in a big beautiful bay horse while he was in the laboratory for his blood to be drawn for diphtheria antitoxin. He did not offer to bite or kick. We asked the technician about him. "We never have any trouble," was his reply. "We take a careful history of the horses before we buy them. If they are of a kicking and a biting stock we do not purchase them, and if we make a mistake, we let the horse go if we have to give him away." What an opportunity for the medical profession to help build a nation of people that will not bite and kick each other and take undue advantage!

Now since health is strength and our nation needs to augment its reserve power in every way, it would seem that the time is propitious for a department of health in the President's cabinet. A broadly educated general practitioner with an advisory council to unify all medical and health organizations and to harmonize relations between the government and the people should be able to serve a great purpose. The government needs the medical profession and the medical profession needs aid and kindly consideration from the government.

The benefits of medicine to human society have been great, but all the people are not receiving the full amount they need and that could be utilized for national strength and efficiency. The medical profession must be courageous, it must meet and deal with health problems as becomes brave and patriotic citizens. The field of medicine must be made broader as well as more efficient to meet the social, economical, and emotional needs of all the people. Every community need must be considered and medical leadership furnished to help solve its problems. A moderately increased number of doctors could be utilized in the interest of total health strength, but of more importance than the increase of numbers is the selection of men for medicine who are really suited to do the job and to give them liberal training even to exceed what is now required for graduation. Coöperative medicine is imperative for the profession's own good and for the benefit of our entire population. There should be unity of purpose between the practitioner and the specialist, the small hospital and the large, the dentist, the nurse and the pharmacist and utilization of medical equipment.

No one thing is of small importance in the practice of medicine. Every doctor in the South especially should feel that he is fulfilling a Divine mission in building health reserves within his clientele. The South in a large measure is the arsenal of democratic manpower for the world. This brings a great challenge as well as a glorious opportunity to the country practitioner especially. No cog in the machinery set up to save world democracy is of more importance than the country doctor in Mississippi. The victories of the medical profession have been great, but the challenge to it now is bigger and broader and of more importance than it has ever been. Let us stand on the history of the past and catch the vision of the broader opportunities of the future. Let us adjust our hearts to the invisible broadcasting station beyond the clouds in order that we may be endowed with power and strength within to carry on in the democratic way. Let us keep in mind the Golden Rule as our standard of ethics, never forgetting that service is the measure of greatness, and hold fast to the faith that the Man who 'spoke these truths created the laws of medical science and that He has the power to save the democratic plan of government that He brought to earth.

Report of Five Cases of Unilateral Ectopic Kidney Located in the Pelvis*

PAUL G. GAMBLE, M.D., F.A.C.S.
GREENVILLE, MISS.

WITH THE ADVANCES made in urological diagnostic acumen during the last few years many anomalies of the upper urinary tract have been reported—viz.: unilateral ectopic, crossed ectopic kidney, horseshoe kidney, double ureters and others.

The ectopic kidney may be perfectly normal in appearance or it may be moderately hypoplastic and lobulated. In view of its congenital mal-location its questionable ability to empty itself through the abnormally placed pelvis and ureters, such a kidney may become the site of disease. Both in the literature and in our experience infection, hydronephrosis, calculus formation have been noted as the most common complications. It has been claimed by some that over 80% of these kidneys are diseased. This agrees with the facts as seen in our cases. Perhaps a different picture will be presented when hundreds of cases are reported.

There are other peculiarities in these ectopic kidneys such as variations in the arterial and venous blood supply both as to the number of vessels going to the ectopic kidney and as to their origin. At times as many as three or six arteries enter the misplaced organ and they may arise from the aorta at or about its bifurcation or from the common or external iliac. They may arise on the side where the ectopic kidney should have developed or from the other side. The former origin is more usual. Rarely the adrenal gland may wander across the midline with the displaced kidney, usually remaining undisturbed. In some cases, especially in women, there is the development of disturbance in the internal generative organs. According to an analysis of a series of 108 cases the occurrence incidence in relation to sex was 70 males and 38 females.

In the Pagel series of 55 cases the right kidney was displaced 27 times and the left 28 times. In our series of five cases there were three males and two females. The right kidney was displaced in three cases and the left in two.

The accurate diagnosis of this condition depends upon the combination of cystoscope with opaque catheter and retrograde pyelography as well as upon excretory urography which, as it becomes more familiar to us, will probably discover many otherwise unsuspected cases of ectopia. Palpation of the abdomen may detect a mass and raise the suspicion of a retroperitoneal growth. Stone shadow in atypical position may suggest a renal deformity, but roentgenography will always be the final test and confirm the diagnosis. As seen in one of our cases the opaque catheter passes up from a normally placed ureteral opening, the catheter making a sudden turn in the pelvis.

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The use of the opaque catheter is sufficient to make the diagnosis. The pyelographic methods are necessary in a complete study of these cases to demonstrate deformities of the pelvis and calyces, the presence of hydronephrosis and other pathological conditions.

Excretory urography is sure to prove most useful in discovering these cases but the picture produced in the roentgen film will be less striking than those obtained with opaque catheters and retrograde pyelography.

If the ectopic kidney is diseased and not functioning well it is perfectly possible that no adequate delineation of the pelvis and ureter of the ectopic kidney in the intravenous pyelogram will be obtained, though the visualization of only one definite organ will naturally suggest the employment of a cystoscopic examination, the introduction of opaque catheter and retrograde pyelogram of the suspected kidney.

To the gynecologist the ectopic kidney is of some interest because of its similarity to pelvic tumors. Recognition is quite rare when accompanied by a gynecological condition and may lead to a mistaken diagnosis. For this reason its preoperative identification is of great importance. In obstetrics the ectopic kidney may interfere with the descent of the foetus.

Intravenous and retrograde pyelograms should be made if the symptoms are suggestive of a kidney lesion. The ectopic kidney is always congenital.

SYMPTOMS. There are no symptoms that particularly suggest this condition. There is usually urinary disturbance, backache, indigestion, constipation and by palpation of the abdomen a mass may be felt. Vaginal or rectal examination may reveal a mass in the pelvis. Very often the urine will contain pus and a few red blood cells.

The treatment may be divided into palliative and surgical. The surgical treatment, if the kidney is functionless, consists of nephrectomy done retroperitoneally. When possible, if the kidney has good function and is not giving any symptoms it probably should be left alone. If the pedicle is long enough to justify anchoring the kidney this should be done. If hydronephrosis is present and the patient refuses operation repeated ureteral catherization should be employed.

CASE: Mrs. M.

Symptoms—pain in lower abdomen, constipation, urinary disturbance, backache.

Physical examination—had no focal infection in mouth, tonsils out. Chest—no pathology heard in lungs, and heart was normal. Blood pressure 130/70. Tenderness and soreness over the urinary bladder. Vaginal examination—a mass in the pelvis, thought at first to be an ovarian cyst. X-ray revealed otherwise.

Urinalysis—color yellow, reaction acid, sp. gr. 1019, albumin a faint trace, sugar negative, casts negative, epithelium few, pus cells occasional. Culture B. coli. Blood count Hb. 80, R.B.C. 4,560,000, leukocytes 7,550, L 28, M. 3, polys 72, malaria negative, blood Wassermann negative.

The x-ray showed intravenous pyelogram—five minutes, fifteen minutes and one-half hour after the injection of the Diodrast the left kidney showed normal secretion and normal outlines of the pelvis and calyces. The right kidney was not visualized at all. Certainly there was no function of the right kidney. A retrograde pyelogram is desirable to check up the site of the right kidney. Cystoscopic examination—normal bladder mucosa. Catheter passed in right ureteral opening, cloudy urine drained off.

Retrograde pyelogram—the retrograde pyelogram of the right kidney showed a twisted ureteral catheter in an ectopic pelvic kidney, situated in the level of the upper third of the sacrum. The kidney pelvis appeared larger than usual U-shaped, no calyces could be distinguished. In correspondence with the findings of the intravenous pyelogram it was most likely that the right ectopic kidney had little or no function.

Patient was advised to have this kidney removed and refused. Ureteral catherization was done, with temporary relief.

CASE: B. C.

Symptoms—backache, chills, fever, loss of weight, soreness in lower abdomen, painful frequent urination.

Physical examination—head—several teeth filled, some pyorrhea. Tonsils out. Heart and lungs normal. Abdomen, marked tenderness and soreness over the urinary bladder. Rectal examination revealed a mass in the pelvis that could just be felt.

An intravenous pyelogram was done and fifteen minutes after the injection of the diodrast there was no visualization of the right kidney. There was an enlarged kidney pelvis and flattened calyces on the left side. A retrograde pyelogram is necessary. Retrograde pyelogram of the right kidney showed an ectopic and hydronephrotic kidney in the level of the sacrum, a short ureter.

Urinalysis—color yellow, appearance turbid, reaction neutral, sp. gr. 1007, albumin a marked trace, sugar negative, epithelium few, pus cells many, blood occasional. Blood count Hb. 80, R.B.C. 4,580,000, W.B.C. 8,350, L 28, M. 3, polys 69, malaria negative, blood Wassermann negative.

A diagnosis of ectopic right kidney was made and removal of the kidney advised.

At operation a right rectus incision was made over the mass, the peritoneum reflected inward, the kidney freed, the pedicle of the ectopic kidney clamped, ligated and cut, kidney removed. There were two arteries coming from the common iliac. The ureter was short.

Patient's convalescence was uncomplicated, and recovery complete.

CASE: F. A.

Patient entered the hospital with complaint of acute abdominal pain and a mass in the right lower abdomen. Had been diagnosed appendiceal abscess. Temperature was 103°. Physical examination showed his face flushed, tongue coated, breath foul, marked pyorrhea. Examination of heart and lungs normal. Examination of abdomen revealed a large mass in the lower right abdomen. Extremities normal.

Urinalysis—color yellow, appearance turbid. Reaction acid, sp. gr. N.S. albumin a trace, sugar negative, pus cells many.

Patient was catheterized but the mass did not disappear. Under a local anesthetic the mass was opened and a large quantity of fluid evacuated. In a few hours there was noticed the odor of urine to the drainage. When patient was better a pyelogram was made.

1. *X-ray.* Flat abdomen showed a drainage tube fastened by a safety pin in the right half of the abdomen.

2. Five minutes after the intravenous injection of diodrast there was some initial secretion in the left but not the right kidney. After fifteen minutes the left kidney was better visualized. After forty-five minutes the left kidney showed an elongated but normally shaped pelvis, the left ureter and possibly a small part of the medial third of the right ureter were visualized but neither picture showed any secretion in the right kidney. The bladder was slightly filled. Apparently the right kidney was out of function, the left kidney normal.

3. Twenty cc. of sodium iodide were injected through the drainage tube. This showed a large and irregularly bordered sac at the level of the sacrum apparently not in connection with the bladder but a connection with the ureter or kidney could not be excluded.

A diagnosis of right ectopic hydronephrotic kidney was made and nephrectomy advised.

The scar of the previous operation was excised, the peritoneal cavity opened and the retroperitoneal layer was incised and dissected from around the kidney. The kidney delivered, the pedicle clamped and doubly ligated. Closure with drainage. Postoperative condition good. Patient made an uneventful recovery and was completely relieved of his trouble.

CASE: Mr. K. Male. White. Age 46.

Patient complained of indigestion, constipation, backache low down. At times difficulty in voiding. Was very excitable and nervous.

Urinalysis showed —color straw, reaction acid, sp. gr. 1022, albumin a faint trace, sugar negative, casts negative, epithelium occasionally, pus cells few. Blood count Hb. 80, R.B.C. 4,600,000, W.B.C. 12,950, L 33, M. 2, polys 65, malaria negative. Blood Wassermann negative, stool examination negative for parasites.

Intravenous and left retrograde pyelograms showed the following: Films were made 4, 10 and 25 minutes after the intravenous administration of skiodan. The four-minute film showed excellent visualization of the right kidney which was large within normal limits. None of these films showed visualization of the left kidney pelvis but the pelvic portion of the left ureter was well visualized and was shown directly almost to the midline. Film projections of the left renal region demonstrated no kidney outline.

Retrograde left pyelographic examination showed the kidney pelvis opposite the first and second piece of the sacrum, slightly more to the left than the right. This pelvis was of bifid type, showing general enlargement of moderate degree and definite evidence of dilatation of minor calyces of the upper group. The upper calyces were directed vertically upward, the lower group directed laterally toward the left. Thus the hilum of the kidney was directed to the right and downward. The left ureter was short and not especially tortuous. Diagnosis—congenital ectopy of the left kidney with short ureter. The kidney had a bifid pelvis and there was evidence of a moderate degree of hydronephrosis. Right kidney normal.

Operation was advised. A midline incision was made, the peritoneum over the left kidney incised, unable to deliver kidney. The pedicle was identified, clamped, cut and ligated with No. 2 catgut. A small penrose tube was placed in the region where the kidney was located. Appendix was also removed. Tube brought out at the lower angle of wound. Closure—No. 2 c.g. in peritoneum and fascia, silkworm gut for skin. Postoperative condition good.

Patient made an eventful recovery and was entirely relieved of all symptoms.

CASE: J. M. White. Age 28.

Ectopic kidney was discovered at operation which was performed for the removal of a chronic appendix and correction of a retrodisplaced uterus. She had been under observation for several days and urinalysis had not shown anything other than a trace of albumin and a few pus cells. Blood count, Hb. 80, R.B.C. 4,400,000, W.B.C. 5,150, L 38, M.3, polys 52, Eo. 7, malaria negative. Blood Wassermann negative.

Symptoms complained of were pain in right side of abdomen, indigestion and backache. Diagnosis: chronic appendicitis, retrodisplaced uterus.

Upon opening the abdomen and exploring the pelvis the left kidney was found to be ectopic, it had a fairly long ureter and blood vessels. The appendix was removed, the retrodisplacement corrected and the left kidney anchored as high as possible in the lumber region.

Patient made an uncomplicated convalescence and has been entirely relieved of all symptoms and pain.

The Management of Urinary Tract Calculi[*]

A. V. BEACHAM, M.D.[†]
Magnolia, Miss.
HUGH T. BEACHAM, M.D.,[‡] and W. D. BEACHAM, M.D.[§]
New Orleans, La.

Historical Consideration

Few human diseases possess such antiquity as does urinary lithiasis. Many of the earliest medical writings present descriptions of some of the signs and symptoms of calculous disease; consequently, we may rightfully conclude that renal and vesical calculi appeared with the dawn of civilization

To Shattack goes the credit for describing the oldest renal calculus. This was discovered in an Egyptian tomb dating from the Second Dynasty, about 4100 B. C.

Elliot Smith, an archeologist, found a vesical calculus in a mummy who had lived approximately 500 years before Christ. He also reported a renal calculus in the remains of a priest of the Twenty-First Dynasty.

Celsus, who lived about 25 A.D., described the operative treatment of stone in the bladder. In brief, the operation consisted in the pulling down of the calculus toward the perineum by means of a finger in the rectum. The stone was then extracted with forceps through an incision made directly over it. The procedure, according to him, was suitable to children under the age of fourteen years. Although suprapubic lithotomy was described in Hindu writings at about the beginning of the Christian era, it was the sixteenth century before the European surgeons employed it. The writers of India even went so far as to classify stones by their character.

Hippocrates (460-370 B.C.) wrote a description of renal colic, which was destined to become classical. He recognized both renal and vesical calculi, and advised cutting down on the kidney when there was definite swelling in the loin. Although he opened the pyonephrotic organ it is not absolutely certain that he actually removed renal calculi.

The famous case of the Archer of Mendon, operated upon in 1474 by Colot, was probably the first intentional nephrotomy for calculus, but the episode was clothed with such mystery that it cannot be accepted with certainty.

Riotan, in the seventeenth century, recognized the coral-like form of renal calculi, and was aware of the position of the ureter, renal pelvis, and calyces. Furthermore, he showed that the kidney can be exposed without injury to the peritoneum. A few years later, Zambeccarius (1670), followed by Roonheysen (1672), and Blankart (1690) proved experimentally that life could be maintained after removal of a kidney.

In 1869, Gustave Simon performed the first known meditated nephrectomy, and with this operation modern urologic surgery commenced. Eight years later, Nitze introduced his cystoscope and urology had its true inception. Thomas A. Edison shares in the glory that belongs to the heroes of urology because it was his invention of the incandescent lamp which made the cystoscope practicable.

In 1873, Ingalls performed a nephrolithotomy in the Boston City Hospital, but he failed to report his operation until Morris had recorded a similar procedure in 1880. In 1898, the latter gave an account of 34 such operations with only one death.

The introduction of the use of the roentgen ray as a diagnostic means for the recognition of calculi gave great impetus to renal and ureteral surgery. In 1896, MacIntyre produced the first x-ray film showing a stone.

In the years that followed, almost up to the time of the first World War, the interest of general surgeons throughout the world was, with few exceptions, mainly in the development of a proper anatomical approach and perfection of surgical technique. They, for the most part, were concerned with the removal of stone and not with the reasons for the production of said calculi. After the perfection of the cystoscope and the subsequent developments of newer and more accurate urologic diagnostic methods, the conception of stone changed in that it became considered as a sign or manifestation of disease rather than primarily a disease in itself. Although the removal of stone is desirable and important, one must keep in mind the absolute necessity for endeavor to restore the normal dynamics of the urinary tract. To this end urologists have been and are working. Their efforts have been concentrated with those of the chemist, biochemist, physiochemist, bacteriologist, and pathologist in attempts to discover clinical applications for the prevention of stone. To date much progress has been made, but as yet we are far from the goal, as the formation of urinary tract calculi continues to produce one of the major problems of urology.

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[†] General practitioner.

[‡] From the Department of Urology, Louisiana State University School of Medicine.

[§] Formerly Senior Resident in Urology, Charity Hospital of Louisiana at New Orleans.

Hunt (1930) stated that one-third of all patients with renal stone lose a kidney, either from nephrectomy or destruction. The statement is a challenge to the general practitioner, the internist, the general surgeon, and the urologist. The truth of it lies in procrastination on the part of the patient, delay caused by ignorance of the presence of "symptomless or silent stones," missed diagnoses, and or mismanagement after discovery.

Although the great majority of stones originate in the kidney, they also form primarily in the bladder, prostate gland, and seminal vesicles. Furthermore, under conditions of stasis they may begin in the ureter and urethra. Calculi in the upper urinary tract (kidney and ureter) give rise to pathological, clinical, and therapeutic conditions which are separate and distinct from those caused by ones present in the mild lower tracts (bladder or urethra). For that reason, we have elected an anatomical approach in a discussion of the management of calculi in the urinary tract.

PREPUTIAL CALCULI

Solely for the sake of completeness, we mention calculi which may be present when the patient exhibits a high degree of phimosis of long standing. If there is much infection, a dorsal slit with removal of the calculi and subsequent hot water baths are indicated. In uncomplicated cases, circumcision is the rule. Incidentally, most of the cases of preputial calculi have been reported by English writers, and in our experience the condition has been very rare.

URETHRAL CALCULI

The treatment of urethral calculus varies with the location and character of the stone or stones. Provided the stone is not too large or firmly impacted, it may be passed as the result of a pinching of the urinary meatus by the patient as he attempts to void, with the effect of hydrostatic pressure or urinostatic distention of the urethra which causes the urine to spurt forth when the patient lets go. If there has been no trauma, injection of the urethra with one per cent procaine or two per cent metycaine solution prior to the above procedure is more apt to give success. Stones in the anterior urethra may be grasped with forceps and drawn out through a meatotomy while the urethra is fully distended with olive or mineral oil. Posterior urethral calculus may be displaced back into the bladder and treated as a vesical calculus. Or, when freely movable in a dilatation or diverticulum, it may be crushed. Impacted stones may require external urethrotomy if anterior, or perineal section if posterior. At the same time, urethral stricture, frequently associated, can be resected. In order to prevent a persistent urethral fistula, perineal urethrostomy or suprapubic cystostomy may be required.

In women external urethrotomy should be performed only after due consideration, due to the likely occurrence of urinary incontinence or fistula.

Urethrovesical stone may be so large that one cannot push it back into the bladder nor break off the urethral portion; consequently, suprapubic removal is indicated.

We have seen only one female case of stones in a urethral diverticulum. This negress was given the benefit of diverticulectomy with excellent results by Dr. Conrad G. Collins.

Postoperative dilatation of urethral strictures over a period of years is, of course, definitely indicated.

PROSTATIC CALCULI

Donatus recognized prostatic calculi in 1687, but the condition attracted little attention until Kretschmer's report in 1918, presenting a collection of 173 cases, 8 of which he had personally observed. The more frequent use of x-ray films plus a greater awareness of the occurrence of prostatic stones which cause symptoms explain the increase in the number of reported cases rather than an increased occurrence of the calculi.

When symptoms are absent or negligible and infection is not demonstrable, patients presenting prostatic stones require no treatment. Prostatic massage is contraindicated in a number of cases since manipulation of the calculi-containing gland is prone to produce symptoms due to local trauma. It is better to examine the patient at intervals, letting the findings determine the course of therapy to be followed. In all cases, complete urologic study is indicated. Certainly such an investigation must be performed before the patient is subjected to surgery. Many urologists perform a transurethral prostatic resection or some type of punch operation. Commenting on such measures, Henline, an enthusiastic advocate of subtotal perineal prostatectomy, declares: "This is a satisfactory procedure in young patients for temporary relief of symptoms, and should not produce impotence or sterility. Results with this type of operation have shown that prostatic calculi are left in the prostate in most cases and that infection persists. It should, therefore, be considered a procedure designed for temporary relief in young people." Likewise, he does not favor Young's "ideal operation in such cases—perineal prostato-lithotomy." Discussing suprapubic and perineal prostatectomy, he states: ". . . . in the absence of an adenoma, small pieces of prostatic tissue may be excised, but inevitably an irregular prostatic urethra is left behind with portions of the true prostatic glands adhering to the capsule. This tissue is usually infected and frequently symptoms persist or complications develop."

Speaking from a personal point of view, we can state that in properly selected cases of prostatic calculi the transurethral prostatic electrotome can be used with a full degree of success. Furthermore, that in other cases, suprapubic enucleation of the prostate gland gives the desired results.

Seminal vesicular stone is very infrequently seen. If symptoms are being produced, extirpation of the seminal vesicles is indicated.

Vesical Calculi

Stones of renal origin which find their way into the bladder usually are passed **via urethram.** However, an obstructive condition may result in retention of the calculus. These conditions are commonly associated with and are probably largely responsible for the formation of primary vesical calculi. They are of great importance in arriving at a decision as to the management of the case at hand. Most bladder stones are removed suprapubically, and at the time of the operation diverticulectomy may be performed if such is indicated. In individuals enjoying an excellent general condition in spite of a surgically enlarged prostate gland, prostatic enucleation can also be performed, but we must admit that we do not see such individuals, and, therefore, we prefer to defer an indicated prostatectomy until at least two weeks have elapsed after the suprapubic cystostomy has been performed. Given a case of urethral stricture complicated by vesical stone, not too large in size, one may dilate the stricture and crush the calculus. If there be contracture of the vesical neck and/or slight to moderate prostatic hyperplasia, one may elect to resect transurethrally the vesical neck or the enlarged prostate gland. Then, at the same time sitting or at a later date, depending upon the general condition of the patient and the local vesical status of affairs, the stone may be crushed and removed. Stones less than one cm. in diameter which have failed to pass may be removed by employing an evacuator, cystoscopic rongeur, or a cystoscopic lithotrite.

For patients in whom suprapubic operation is not indicated for another condition, one must choose between suprapubic lithectomy and litholapaxy. The decision will rest chiefly upon: the age and general condition of the patient, the size of the stone, and the experience of the operator. Sometimes, in males, perineal urethrotomy with subsequent posterior urethral litholapaxy is preferable because of safety. In uncomplicated cases, provided the stone is not too large, litholapaxy is probably the safest method in the hands of a urological expert. Likewise, it is probably the most dangerous when employed by the surgeon without urological training. Its definite contraindications are: a calculus more than 5 cm. in diameter in an adult, stone formed about a foreign body which could not be removed through the urethra, adherent calculi, and stone complicated by certain urethral or vesical abnormalities. Likewise, attention must be given to the possibility of complications in the upper tract, which may demand primary attention.

Ureteral Calculi

For the sake of convenience we may consider the management of cases of ureteral stone under three headings; viz., first, expectant; secondly, transurethral instrumental manipulation; and lastly, incisional or "open operation."

The relief of pain is of utmost importance insofar as the patient is concerned. Of the pain-relieving drugs, morphine still heads the list. We ordinarily administer it intramuscularly in one-fourth grain doses until the patient has been quieted. With the initial dose, usually one-seventy-fifth grain of atropine sulphate is given. In cases of intolerance or hypersensitivity to morphine, one-twentieth grain of dilaudid, or one-third grain of pantopon is given as often as indicated. Many of the "acute" or "attack" cases will require as much as a grain or a grain and one-half of morphine to quiet them, and the other drugs proportionately. The intravenous administration of one gram of calcium chloride solution is worthy of trial as it frequently relieves the pain by relaxing the ureteral musculature and may enhance the possibility of passage of the stone. Too, depropanex (a fraction of a deproteinated pancreatic extract) is of value in relieving the marked discomfort of the patient, being given by hypodermic injection in doses of three to five cc. Carroll and Zingale are particularly enthusiastic about this tissue extract, and our experience with it has been satisfactory. Prostigmin and pitressin have been used with varying degrees of success, and their use as a matter of routine is not advised. The pain of "kidney or ureteral colic" is often excruciating to the degree that the patient is in the bed, out of the bed, beside the bed, and under the bed. If there is any position that even tends to give temporary relief the patient will find it. As we frequently tell the students, a man with stone is apt to behave like a dog with a running fit. Certainly he deserves anything that will give him relief.

In addition to the administration of narcotics and pain relieving drugs, the expectant or non-manipulative or non-operative treatment of cases of urinolithiasis consists of fluids in large quantities, and chemo-therapeutic agents. If the patient can tolerate fluids, their oral administration should be considerable. If nausea and vomiting prohibit oral intake, then five per cent or ten per cent dextrose in sterile distilled water should be given intravenously. If the patient is acidotic, sodium lactate solution by vein is indicated. Marked anemia or marked infection point to the necessity for transfusion.

Chemotherapeusis is of especial importance due to the fact that most of the cases present infection. Members of the sulfanilamide family, sulfathiazole in particular, are of considerable value, and again we wish to emphasize the fact that the presence of staphylococci in the urine is to be considered indicative of some obstructive lesion (including stone) until the contrary is proved. Changing of the reaction of the urine is often of value in the treatment of urinary tract infections, but attempts to acidify an alkaline urine containing urea-splitting organisms by administering ammonium chloride is definitely poor judgment.

Heat, dry or moist, to the affected area is sometimes of value. If there is any appreciable tendency toward renal suppression of urine, shortwave diathermy should be employed without delay. Close observation is in order due to the fact that the patient may pass a stone and yet not be aware of said passage. As a general rule, lack of symptoms indicates that the stone has moved on or that blockage of the urinary flow is incomplete; however, there have been cases in which the stone failed to move and the ureter has continued to be completely blocked even though the patient became symptom-free. For that reason, in addition to those cases in which the stones are definitely causing trouble, cystoscopic intervention should not be deferred too long.

Transurethral instrumental manipulation varies as to location, size, and configuration of the stone, and the general status of the patient. Fortunately, the great majority of ureteral calculi can be obtained or made to pass. Obviously, the manipulative management of stone in the upper ureter differs from that of stone in the lower ureter. The metal instruments, including "stone baskets," etc., are of considerable value in obtaining lower ureteral calculi, but may be actually dangerous in attempting to secure stone in the upper ureter. As a general rule, we can state that stone which is blocked in the upper ureter for any appreciable length of time, in spite of ureteral dilatation or attempts to dislodge it into the renal pelvis, should be removed by open operation. Stone in the lower ureter, provided it is not too large, not too fixed, and not too complicated by obstruction and/or infection should be manipulated. If the calculus is situated at or near the ureteral orifice, ureteral meatotomy with cystoscopic scissors or fulguration tip often proves efficacious.

Certain low ureteral stones can be crushed with a rongeur.

One of the favorite measures, and generally speaking probably the best, of dealing with ureteral stone is the passage of catheters. By means of one or more catheters back-pressure can be relieved and infection can be combated. It is very gratifying to insert a catheter, obtain infected urine, lavage the renal pelvis, relieve the patient of his or her pain, and watch the temperature fall to normal within twelve to thirty-six hours. It is even more gratifying to remove the catheter in a few days and have the stone come tumbling after. Crance advocated the leaving of catheters in place for 24, 48, or 72 hours. After this time, all catheters are plugged except one, and through that one sterile distilled water is injected until the patient feels discomfort, that being the sign for gentle withdrawal of the catheters. The employment of avertin solution (one gram of the crystals having been dissolved in 50 cc. of warm sterile distilled water) in place of the plain water has given good results in our experience, comparable to that of Jarman and Scott, who reported a series of 27 consecutive cases of calculi in the ureter, in 25 of which the calculus was recovered after the injection of the avertin solution. In those cases in which a catheter or small bougie cannot be passed, one may be able to introduce a whalebone beyond the site of obstruction and leave it in place to relieve a complete blockage of the urinary flow. Although we have had no unpleasant experiences with the use of whalebones, a word of caution should be sounded regarding the likelihood of ureteral perforation if careful gentleness is not employed.

Fortunately, bilateral impacted ureteral stone is very rare. In such cases with complete obstruction to the flow of urine, one must successfully pass catheters or perform bilateral pyelostomy, later manipulating or openly obtaining the stones.

As Higgins concludes: "A review of the literature shows that the numerous methods of transvesical extraction of stones that have been recommended indicate the ineffectiveness of any one method. Extractors should never be forced into the ureter; gentleness of manipulation will prevent many complications. Perhaps no pathological condition in the urinary tract tries the clinical judgment of the surgeon more than a stone impacted in the ureter."

Incisional or open operative management is indicated in those cases, as Moore has stated, in which repeated manipulation taxes the patient beyond endurance and may result in infection with its unpleasant trend of events. It should not be deferred until permanent renal damage has occurred. Retroperitoneal ureterolithectomy should be performed, and the wound drained as a matter of routine. In the female presenting stone in the lower ureter, the vaginal approach should be strongly considered. The advantage of this procedure is that it produces little shock, being performed easily and quickly, as a rule. Hicks and Marius pointed out the possibility of the formation of fistulate, but a study of the literature does not bear this out.

Simply obtaining ureteral stone does not complete the treatment. The case should be followed carefully and given the benefit of intelligent urologic attention.

RENAL CALCULI

The management of renal stone depends upon a multiplicity of factors. In all of the "acute attack" cases, the measures set forth under the expectant treatment of ureteral calculi are applicable. Those cases presenting calculi in a position or of a size to cause symptoms and/or injury to the kidney are candidates for complete urological investigation in order to decide upon conservative or radical surgery. Individuals having passed small stones but having "negative" x-ray findings, and those who reform stones after surgical or manipulative removal should be given the benefit of prophylactic treatment and close observation. Those cases in whom the formation of calculi is associated with hyperparathyroidism require joint study on the part of the internist, general surgeon, and urologist.

As to the prophylaxis of stones, we must still admit that too little is known of the relation of calculus formation to diet; however, we can say that a well balanced diet and plenty of pure water are rational. Furthermore, vitamin A is indicated. Unfortunately, stone analysis is rarely helpful in outlining a diet which will prevent the formation of other or similar stones in a given individual. If the calculus is phosphatic, a high protein diet and an acid urine are desirable. If the stone is chiefly cystine, a strict vegetable diet and alkalies will not only prevent reformation, but may actually cause spontaneous disappearance

However, as Higgins writes: "It has previously been stated that a calculus in the kidney should not be treated by dietary means if it produces obstruction, thereby impairing renal function. Also, the diet should not be prescribed if a co-existing infection which cannot be eradicated is present, and it is obvious if the pH of the urine cannot be controlled no results can be anticipated. In spite of this, case reports have been presented in which a calculus in the kidney with a co-existing proteus infection has been treated by the acid-ash diet and acidifying agents. As the pH of the urine cannot be controlled by either, such treatment is contraindicated, as well as the use of ammonium chloride."

Many articles dealing with urolithiasis medicamentosa have appeared. Suffice it to say that copious amounts of fluids are indicated in the administration of drugs apt to produce stones, of which sulfapyridine is one of the chief offenders. Furthermore, the prevention of calculus formation in orthopedic patients consists primarily in maintaining an acid pH. Once again, a high vitamin acid-ash diet is indicated.

A patient presenting a small stone without symptoms or evidence of renal damage deserves periodic examinations of the urine and roentgenograms. If there is the least bit of doubt as to what is taking place in the renal pelvis, pyelography should be employed. Discomfort, pyuria, or hematuria indicate strong thought regarding surgery. The case of multiple small calculi calls for careful consideration. Although the use of x-rays at the operating room table have definitely increased the likelihood of complete removal of all of the stones, recurrences are still met. Good function in spite of infection causes one to be on guard in the probability that the stones will increase in size and renal damage will occur.

All writers admit that the frequency of nephrectomy in reported cases of renal calculi is too high. This simply means that the patient, through ignorance or procrastination or both has not sought treatment or his medical advisors have failed to recognize the true status of the renal trend of events.

Solitary, congenital or acquired, kidney with stone, of course, requires conservatism of kidney tissue. As a rule, this means prompt open treatment.

In bilateral stone cases, nephrectomy is rarely indicated. As a general rule, it is better first to operate upon the side which can be managed with the less difficulty. In aseptic cases, the better or rather less poor kidney should be operated upon first. Hryntschak is strongly in favor of removing bilateral renal calculi unless contraindications exist. His opinion comes about as the result of their destructive action upon the renal parenchyma. Bibus expresses a wise view when he states that the kidney which greater endangers the life of the patient or which is itself in greater danger of destruction should be treated first. Although perusal of the literature reveals the expression of various opinions, the general consensus of opinion is that the better kidney should be operated upon first when surgical intervention is deemed advisable.

In cases of unilateral stone, the condition of the kidney and the compensatory state of its fellow of the opposite side will determine the wisdom of nephrectomy. Pyelolithectomy is to be desired rather than nephrotomy. Too, heminephrectomy is valuable in certain cases. A consideration of the various types of kidney operations, however, is not within the scope of this discussion.

About the complicating factors of strictures, diverticula, congenital anomalies, prostatic obstructions, and marked infection we have spoken. Stone associated with malignancy, pregnancy, tuberculosis, or diabetes mellitus presents additional problems, all of which are worthy of lengthy dissertation.

CONCLUSIONS

1. The history of urinalithiasis is as old as the history of medicine.

2. The management of urinary tract calculi still comprises one of the chief problems of urology.

3. The therapy of stone cases depends upon many factors, including: location, size, number, type, mobility, and duration of stone or stones present; the degree of obstruction to the urinary flow; the function of each kidney; the degree and kind of associated infection; the age, sex, and general condition of the patient; and the presence of any of the following complicating factors: congenital anomalies, strictures, diverticula, prostatic obstructions, new growths (benign or malignant), pregnancy, diabetes, or tuberculosis.

4. Cases of combined stone require individual decision. As a general rule treatment should be from below upward, with the exception of

giving ureteral stones priority over vesical calculi.

5. All stone cases, even that of the patient who passes a stone with little or practically no difficulty, should be given the benefit of thorough urologic investigation, including complete bacteriologic study of the urine.

6. Conservatism in surgical treatment should be the rule.

7. The best means at hand in the prophylaxis of calculi are: well balanced diet, high vitamin A intake, and copious amounts of pure water.

8. The high vitamin A acid-ash or alkaline-ash diet is of value in the prevention of recurrent stone formation, in the prevention of the formation of calculi in orthopedic patients, and in those cases who pass stones at frequent intervals but in whom calculi are not demonstrable in the kidney. It is also of value in the solution of calculi in a very restricted group of patients.

9. Close follow-up for a minimum of three to five years is indicated in all calculi cases.

10. Education of the public plus close cooperation on the part of the general practitioner, the general surgeon, the internist, the pediatrician, and the urologist would solve the chief problems of the management of urinary tract calculi.

BIBLIOGRAPHY

Bibus, B.: Ztschr. f. urol. Chir. u. Gynaek. 43:293 1937.

Blankart cited by Campbell, E. D.: Urol. & Cutan. Rev. 44:710, Nov., 1940.

Cabot, Hugh: Modern Urology, vol. 2, p. 126, Lea & Febiger, Phila., 1936.

Campbell, M. F.: Pediatric Urology, vol. 2, p. 191, MacMillan Co., N. Y., 1937.

Chute, Richard, and Suby, H. I.: J. Urol. 44:590. Nov., 1940.

Colot cited by Campbell, E. D.: Urol. and Cutan. Rev. 44:710, Nov., 1940.

Crance, G. M.: Am. J. Surg., 15:120, 1932.

Eisendrath, D. N., and Rolnick, H. C.: Urology, 4th ed., p. 492, J. B. Lippincott Co., Philadelphia, 1938.

Harrington, H. L.: J. Urol., 44:507, Oct., 1940.

Hicks, W. K., and Marius, G.: J. Iowa State M. Soc., 27:107, 1937.

Higgins, C. C.: Surg., Gynec., and Obst., 68:392, April, 1939.

Hinman, Frank: The Principles and Practice of Urology, Subdivision iv, p. 631, W. B. Saunders Co., Philadelphia, 1935.

Hirsch, E. W., and Bass, H. H.: Urol. and Cutan. Rev., 44:291, May, 1940.

Hryntschak, T.: Ztschr. f. urol. Chir., 40:211, 1935.

Ingalls, William cited by Campbell, E. D.: Urol. and Cutan. Rev., 44:710, Nov. 1940.

Jarman, W. D., and Scott, W. W.: J. Urol., 83: 111, 1937.

Keyes, E. L., and Ferguson, R. S.: Urology, 6th ed., Chap. xxx, p. 260, D. Appleton-Century Co., Inc., N. Y., 1936.

Kretschmer, H. L.: Amer. J. Dis. of Child., 52:513, Sept., 1936.

MacIntyre cited by Campbell, E. D.: Urol. and Cutan. Rev., 44:710, Nov., 1940.

Morris cited by Campbell, E. D.: Urol. and Cutan Rev., 44:710, Nov., 1940.

Oppenheimer, G. D.: Surg., Gynec., and Obst., 65: 829, December, 1937.

Riotan cited by Campbell, E. D.: Urol. and Cutan. Rev., 44:710, Nov., 1940.

Roonheysen cited by Campbell, E. D.: Urol and Cutan. Rev., 44:710, Nov., 1940.

Schenck, G. F., and Lane, C. R.: J. Urol., 37:79, 1937.

Shattack cited by Campbell, E. D.: Urol and Cutan. Rev., 44:710, Nov., 1940.

Simon, Gustave cited by Campbell, E. D.: Urol. and Cutan. Rev., 44:710, Nov., 1940.

Smith, Elliott cited by Campbell, E. D.: Urol. and Cutan. Rev., 44:710, Nov., 1940.

Thomson-Walker, J.: Surgical Diseases and Injuries of the Genito-Urinary Organs, 18:264, 2nd ed., Wm. Wood and Co., Baltimore, 1936.

Zambeccarius cited by Campbell, E. D.: Urol and Cutan. Rev., 44:710, Nov., 1940.

Thirteen Ways To Control Blood Pressure

L. B. AUSTIN, M.D.
ROSEDALE, MISS.

BLOOD PRESSURE is nothing more or less than pressure exerted by the blood on the walls of the blood vessels through which it flows. When the pressure is greater than normal we have a condition known as high blood pressure or hypertension but it should be borne in mind that the fluctuations in the blood pressure do not indicate the individual's physical condition. Blood pressure varies in many individuals for many reasons. A slight rise in blood pressure does not mean the individual is in a worse condition, for it should be remembered, blood pressure is not a disease but a physiological adjustment.

Histologists tell us that the human body is made up of body cells. Physiologists tell us that we have five normal functions of the body cells as follows: *nutrition, elimination, motion, repair, nervous control.* They also tell us that as long as all of the cells perform their functions that the body is in a healthy condition and that the blood pressure is normal. In other words, if the body is in perfect health the blood pressure remains normal.

There are eight essentials of health, as follows: *Adequate medical supervision, air, food, water, rest, exercise, sunshine, and mental hygiene.*

AIR

In our prenatal cases we have learned that by giving our patients instruction in scientific breathing that the blood pressure is influenced and is apt to remain normal.

NUTRITION

The chemists' tell us the body is made up of sixteen chemical substances. They also tell us that the Ph of the blood shows us the ratio between acids and alkalies is 80-20. So it is common sense to feed patients only the foods that contain these chemicals in the proper proportions to maintain a normal alkali and acid state.

THE CAUSES OF ABNORMAL BLOOD PRESSURE

The pathologists tell us that there are only five causes of disease, as follows: breathing denatured air, or air containing impurities, feeding patients improper mixtures of food and foods that contain chemicals the body does not need, by giving drinks that contain poisons, allowing them to become infected with disease germs and accidents.

SUNSHINE

The biologists tell us that the animals must have enough sunshine to guarantee vitamins for the blood stream and other chemical changes.

MENTAL HYGIENE

The psychiatrists tell us that anxiety, worry, fear and other negative mental states alter the blood pressure.

THE TREATMENT OF ABNORMAL BLOOD PRESSURE

The treatments are divided into three parts, medical, surgical, and physical therapy. These three treatments cannot have but five effects.

Surgical Treatments. Certain operations have been devised to restore nervous control. Other operations are done to restore normal functions of the body cells. Space does not permit me to name all of these operations.

Physical Therapy. Physical therapy treatments can only bring about the following changes: Sinusoidal currents are used to improve the function of motion. Vibratory treatments, including massage, are used for the same purpose. Fever therapy, diathermy and other heating methods are used to improve the function of elimination. Ultra violet light and the galvanic currents are used to bring about chemical changes in order to restore the body cells to a normal condition. The Faradic current is used for the purpose of relaxing or stimulating the nerve supply causing a change in the caliber of the blood vessels.

Medical Treatments. All chemicals and drugs that have any permanent beneficial effect on blood pressure must be given for the purpose of restoring the health and integrity of the body cells. There can be only two things that can be done with drugs and chemicals. One class of drugs and chemicals is given for the purpose of bringing about the neutralization and elimination of the chemical substances that are present in the body cells, causing an abnormal state. The second list of drugs and chemicals is given for the purpose of restoring the chemical balance and acting as food and catalysts to put back into the body the chemicals necessary to restore the body to normal health. I have named all the factors that control blood pressure. If any of these factors are changed or modified it is reflected in the blood pressure and changed to an abnormal condition.

TREATMENTS

Life and nature have the raw materials with which to heal diseases and do it, when influenced to create health. In the human body we frequently find a shortage of chemical substances, in order to overcome this chemical deficiency we inject into the blood stream the following chemicals: sodium iodide, potassium iodide, guaiacol, creosote, sodium salicylate, calcium cacodylate, potassium nitrate, magnesium sulphate, lithium bromide, potassium citrate, quinine dicacodylate, iron cacodylate, magnesium chloride, sodium chloride. We also feed the patient foods that contain vitamins and minerals.

Allimin is considered a valuable treatment due to the fact that it has a specific effect on the body cells. Those cases of high blood pressure due to an interference of the function of elimination and the function of repair are improved and relieved. The function of elimination is improved because allimin has a specific chemical affinity for the toxins that are causing the high blood pressure.

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FORWARD WE MARCH

Many important medical discoveries and improvements have occurred in the last decade. Ten years ago the writer was graduated from medical college and it seemed the obstacles in the way of further needed improvements were so great that many years would elapse before anything new would come out. Nevertheless, the new came.

Atabrine proved a valuable addition to the malaria armamentarium. Then one may think of vitamins. Nicotinic acid and vitamin K promise revolutionary changes. Chest surgery as treatment for tuberculosis has become more popular due to its efficacy. New antisyphilitic drugs have been introduced. Indeed, the drug list seems endless. Sensational in the '21-'31 decade was insulin, which field has been greatly enhanced by protamine zinc insulin in the present period.

Perhaps at the top of the list in view of importance is the sulfonamide group. First came sulfanilamide, next sulfapyridine, later sulfathiazole. The accomplishments, even with their limitations, of this group is astounding. It has been truly said that sulfathiazole and sulfapyridine have reduced both the morbidity and mortality of pneumonia more since their discovery than all the other remedies combined in the last twenty years!

And to my desk this morning from a leading drug firm came an announcement of sulfaguanidine (sulfonamide group) indicated in bacillary dysentery. Experimental work at the John Gaston Hospital, Memphis, last season established the efficacy of sulfathiazole in bacillary dysentery. Now one will want to know if sulfaguanidine is the superior drug in dysentery.

With war comes advances in surgery. Trueta, in the Spanish Civil War, gave a new twist to what is essentially the Orr principle in treating compound wounds and osteomyelitis. Trueta does a débridement, then applies plaster-of-Paris splints directly to the skin and to the open wound leaving it then for a prolonged period.

No doubt the present World War will bring out further advances. Forward we march! What will the next decade bring?

—S. A. H.

Dr. A. Street is now president of the Mississippi State Medical Association. In him we have one of the outstanding surgeons of the state and a man well versed in medical history. He is not only broadly read in medical literature, but he is also well informed on matters of general interest. He thinks honestly and in logical order. He inherited a liberal portion of mental power and he has been well trained. The Streets have built a medical institution in Vicksburg. It has been constructed around medical integrity and sound business. Dr. A. Street has been very active in medical organization, devoted to his county and state societies, and the American Medical Association. As president-elect he was very active in urging the importance of membership in these associations. Dr. Street will be liberal in expenditure of time and thought for the state association during his tenure of office. Let everyone extend to him a cordial and a helping hand. We are inviting him to use the pages of this journal freely in his work for the association and we are wishing for him and for the association a most successful year.

The introduction of Dr. Rudolph Matas by Dr. W. A. Evans rang the bell.

The next meeting of the State Association goes to Jackson. We have no better place to meet than the state capital.

Dr. George Adkins, of Jackson, is now president of the Mississippi State Hospital Association.

Many strong and able members of our profession have passed from the ranks within the last few weeks. We deeply regret their going.

The shortage of doctors in Mississippi under present conditions calls for a closer coöperation of members of the profession and a deeper devotion to the cause.

In our next issue we expect to have a complete list of our commercial exhibitors so that you may know who came. Other things being equal, we hope you trade with them.

In the death of Dr. Willis Campbell Mississippi lost one of her most distinguished native sons, Memphis and the Mid-South, a man who brought this section fame and whose name was known around the medical world. By the restoration of a crippled foot, or hand or back he made happy many a human heart. Dr. Campbell was a great organizer. He was a man of vision and practical application to make his dreams come true. It is very fortunate that he built up a wonderful organization that will carry on even after he has gone to his reward. For years to come his name will be called blessed by hundreds.

It was a great treat to the state association to have Dr. Rudolph Matas deliver the annual oration. With the march of medicine he seems to be gaining momentum and increasing his speed rather than slowing down after more than sixty years of active practice. You will read in the next issue of the journal his tribute to Dr. Ewing Fox Howard and his oration. It was very fitting to have one of his older students, Dr. W. A. Evans, a native of Aberdeen and a citizen of the world, introduce him. It was an occasion on which master met master, two "barbasheelies" excelling each other.

It riles the medical profession to call it a "trade union" and rightly so, but during the perilous times in which we are now found, it behooves the profession to double its energy to see that the people have the service they need. All these long hours off duty and few hours on when people are sick and accidents are killing more people than war, it is not good policy for the profession to be strict with its hours. Continuous medical service must be made available for twenty-four hours in the day—not for all medical service, but for the many emergencies that must have prompt attention. This can be done with the coöperation of the profession and the people.

When Dr. Sidney W. Johnston, of Vicksburg, closed his eyes in eternal sleep a few days ago, the Mississippi State Medical Association lost one of its choicest spirits. Vicksburg has been and is one of Mississippi's outstanding medical centers and it has had no one doctor in its entire history who was more sincerely loved and respected than Dr. Sidney Johnston. His heart was big and generous, his love was deep and his friendship sincere. It was not within him to do harm to any man, but to everyone he was fair and was inclined to do good as the needle is inclined to the pole. His love to relieve the suffering activated his mental efforts to search medical science for the latest truths and the best methods of application. Dr. Johnston was not only an able practitioner and outstanding leader in the profession, worthily and dearly beloved by his fellow doctors, but he was a progressive citizen always found in the front ranks in matters pertaining to the best interests of his state. He ever had the courage to do what he thought was best. No attribute of his inspired one more than his love and devotion to his family. He was not only a dutiful husband and a devoted father, but a joyful comrade. We are happy and count ourselves fortunate to have known Dr. Sidney W. Johnston. His dependable and kind friendship shall never be forgotten. This journal offers its sincere sympathy to Mrs. Johnston and the entire family.

THE PUBLIC NIGHT AT THE STATE MEETING

The purpose of the public night at the state meeting was to inaugurate a program of education that will permit a better understanding between the profession and the laity. The unfortunate indictment against the A. M. A. has done much to shake the faith of the people in the doctor. Other forces have helped to pound at the sacred relation between the physician and the patient. This relation represents one of the most sacred premises of human liberty. And in addition to this trust and confidence between the patient and the doctor has been the greatest force for the advancement of scientific medicine. The knowledge that a person is entrusting to the doctor his life inspires him to supreme effort in learning and applying medical science. The confidence on the part of the patient has enabled the doctor to know and to understand the individual human organism in all of his relations to life, important for a true diagnosis and imperative for successful remedial measures. The demands upon the medical profession have been multiplied a thousand times within recent years. The base must be broadened to reach every human interest and to help solve every human problem. The total strength of our nation is leaning heavily upon health assets as a source of power. The profession in general and the laity owe a great debt to the research man and to the specialist, but the application of medical science in solving medical problems, conquering disease, and increasing the volume and efficiency of human life is yet very largely in the hands of the general practitioner. And he must have the efficient aid of the nurse, the pharmacist and the technician to be able to meet the demands. Government, church, and philanthropy, which have been heavy contributors to medical education and its application, are still leaned upon by him.

It is time for a frank survey of what medicine has done and what it is expected to do, time for a better understanding between the profession and the people. Factual data of the type that the American Medical Association has been giving to the medical profession should be carried on to the public and in turn the viewpoint of the laity should be known and understood by the profession. And as touching the medical policy of medical problems a democratic attitude should be assumed. Thinking along these lines we met with the Gulf Coast society and discussed the Public Night. This be tried. The time was short for the preparation of a program and we appreciate the assistance of every one who helped in the application of the idea. We trust that Public Night may bring about a more sympathetic understanding between the laity and the profession and in this way be the means of a more satisfactory utilization of medical service.

We are grateful to Dr. Lawrence T. Lowrey, president of Blue Mountain College, for his able, instructive, and entertaining address on Public Night at our state meeting.

Another annual meeting of the Mississippi State Medical Association has been held. It was a very fine and enjoyable meeting. Those who did not attend this last meeting at Biloxi missed much of benefit and interest. The program was good; the weather was wonderful and the cordiality of the local physicians and the city was delightful. To discuss the program paper by paper would be superfluous and tiresome. However, it would be evidence of carelessness or disrespect not to make reference to the marvelous review of medical and world events that was brought to us by that medical hero and wonder, Dr. Rudolph Matas. The introduction of Dr. Matas by Dr. W. A. Evans was most interesting—and characteristic of the man. Dr. Lowry Rush, of Meridian, was chosen as president-elect. This honor was worthily bestowed and I feel sure that the duties devolving upon him will be faithfully discharged. Dr. Rush is one of the state's most progressive and accomplished young surgeons. And, as Dr. Matas so forcefully stated, "this is a young man's day in world affairs—and rightly so." The doctor went on to say that the older men are "blocking traffic and should get out of the way." But he made it clear that the relief from this traffic block should be by the older men increasing their speed and not stepping aside or lying down. The forty or fifty years they have had to get up speed should make it all the easier for them to travel fast. The younger men are wonderfully fitted for the *study* of medicine, but I fear they are poorly fitted for the *practice* of medicine. Given the willingness to use the splendid primary preparation that they have had and the willingness to work and to accept from older men the knowledge they have acquired from years of observation and experience, there is no limitation to the heights to which young men may aspire. It is painfully distressing to see the tendency to commercialize our noble profession. This tendency may be general, but it is more noticeable in the recent entrants into the ranks. I am made to wonder if the fault may not be in the teaching that is given to students of medicine today? Time was when they were taught that *service*—honest, faithful and helpful service to the afflicted was the prime object and purpose that should actuate every student and practitioner of medicine. Not even the acquisition of fame and honor should be allowed to enter into the equasion. These are sure to come to those who are deserving. It is to be regretted that the glamour of specialism and especially of surgery is blinding and misleading too many of our recent graduates. Anyone who can handle a knife and tie a bleeding vessel and who has a smattering of anatomy can do a spectacular operation. But a profound knowledge of pathology, physiology and psychiatry are absolute prerequisites to *good* surgery. The *art* of surgery may be quickly and easily acquired, but to become a safe and scientific surgeon is permitted only to those who are favored of the gods with wisdom and honesty of purpose. Tom Marshall once said that the world's greatest need was a good five-cent cigar, but I think the greatest need of today is that more of our medical men may be endowed with wisdom and a surgical conscience. Why cut and disfigure a helpless human being who in all probability is more sick of mind than of body, unless there is every reason to believe that he or she may be cured or greatly benefited by surgery? It is much easier to become a passable surgeon than to become a good doctor, and fees for surgery are comparatively large and are more often paid—may these reasons not account for the surplus of surgeons and the scarcity of practitioners of general medicine? The *good* surgeon can do good surgery in the home, in the hospital, in the outdoors or wherever the need for surgery may be found while the *poor* surgeon is helpless outside of hospitals and without well trained nurses and assistants. I sometimes wonder if the success of these may not be due to nurses and assistants rather than to any ability or skill of their own? Again, hospitals are great institutions and cannot be dispensed with, but it is a sad fact that those who most need hospital care (especially in rural districts) rarely get it and those who do get it frequently would do as well or better if cared for in their own homes.

In a recent letter to our governor, I told him that no one more highly appreciated or approved of the system of hospitalizing the indigent in our state than do I, but those who most need this service do not get it and those who most frequently get it do not deserve it and frequently do not need it. The bulk of this fund is spent on *surgical* cases (many of whom do not need surgery) and very little of it is spent for the care of *medical* cases that do need hospitalization because of the home environment. Again all too many are admitted on this fund that are not truly indigent. The proverbial and eternal *pull* is all too frequently felt and seen.

—G. S. B.

News and Comments

The twentieth annual scientific and clinical session of the American Congress of Physical Therapy will be held September 1 to 5 inclusive, 1941, at The Mayflower, Washington, D. C. At the same time the twenty-fifth annual meeting of the American Occupational Therapy Association will be held at The Mayflower.

NURSES NEEDED FOR THE GOVERNMENT: The United States Civil Service is announcing another examination for nurses—one a Public Health Nurse, $2,000 per year; and a graduate nurse, $1,800 per year; also one for Junior Graduate Nurse, $1,620 per year. The need for nurses is immediate. Apply for further information at the office of the Secretary, Board of U. S. Civil Service Examiners at any first or second-class post office, or write to the U. S. Civil Service Commission. Washington, D. C.

The First Councilor District Society held its semi-annual session at Cash, Ark., on May 14. Dr. D. L. Massey, of Osceola, is president of the society, with Dr. J. H. McCurry, secretary-treasurer.

Miss Florence Thomason from the headquarters of the American Red Cross was the featured speaker at the convention of the Northeast Mississippi Nurses' Association which met at Corinth on Wednesday, May 14. Nurses from Pontotoc, Lafayette, Union, Chickasaw, Yalobusha, Tippah, Marshall, Benton, Lee, Itawamba, Tishomingo and Alcorn counties compose the membership.

Brig. Gen. Thomas J. Grayson, the adjutant general and director of the State Selective Service System, observed his birthday on May 5. It was also the twenty-fourth anniversary of his participation in World War No. 1. Members of the state military staff presented him a traveling bag as a gift, the presentation being made by Maj. Lawrence Long, head of the medical division of the Selective Service.

The seventy-seventh semi-annual meeting of the First Council District Medical Society was held May 14, at the Baptist Church at Cash, Ark. Guest speakers on the program were Dr. E. M. Holder and Dr. I. G. Duncan, of Memphis. Officers of the society are: Dr. H. D. Massey, of Osceola, president; Dr. R. L. Purnell, of Marion, vice-president; Dr. J. H. Curry, of Cash, secretary-treasurer; and Dr. F. H. Jones, of Piggott, councilor.

Dr. C. L. Green, 64, Hinds County physician, died May 15, at his home in Utica, Miss. He was graduated from Mississippi College and the Vanderbilt Medical College in Nashville. Dr. Green is survived by his wife, Mrs. Bessie Hart Green, one son, Lamar Green, of Jackson, and one daughter, Miss Pearl Elizabeth.

Dr. L. E. Stennis, 75, retired McComb physician, died at his home, May 9. Dr. Stennis was born at Marion, Miss., and had made his home in McComb for the past 48 years. He was married to Miss Sallie Evans on Nov. 21, 1894. He is survived by his wife, a foster son, and one brother.

Dr. R. N. S. Young died suddenly at his home in Brooklyn on May 5. He had lived in Forrest County for 35 years. Dr. Young was born in Monroe County, Miss. He has practiced in Brooklyn for the past 35 years. He was a veteran of the World War and a member of the American Legion, Perry Lodge 366, of the Masons, and the Presbyterian Church. He is survived by his wife, five sisters and one brother.

Dr. R. R. Lord, 83, lifelong resident of Drew County, died at his home in Florence, Ark., May 6, following a short illness. Dr. Lord attended medical school at Memphis one year and graduated from medical school at Little Rock. He has been practicing medicine 43 years. He is survived by four sons and two daughters. Burial was at Mount Tabor Cemetery.

Dr. R. A. Creekmore, Calhoun City physician for 45 years, died at the Baptist Hospital April 16, following an illness of two weeks. He was 67 years of age. He had been in failing health for several years and had gradually given up his practice. Dr. Creekmore was a native of Calhoun City. He attended the Louisville, Ky., Medical School and was graduated from the old Memphis Medical College. He was a director of the Calhoun Bank, a member of the Baptist Church, and the Northeast Mississippi Medical Association. He leaves his wife, two sons and one brother.

Funeral services were held May 17, for Dr. A. L. Wilsford, of Moro, Ark., who died following a heart attack. Dr. Wilsford was 72. He was a native of Nashville, Tenn., but had been a resident of Lee County for more than 50 years. He was active in religious and civic affairs, serving in the state legislature; was a member of the Moro School Board for 49 years; superintendent of the Methodist Church School at the time of his death. Surviving are his wife, a son, two brothers, and three sisters.

Dr. S. B. Henton, 79, succumbed at the family home in Decatur following an illness of several weeks, April 4, 1941. He was the oldest professional man in Newton County, having practiced his profession for 54 years. Dr. Benton was born near Decatur, Aug. 28, 1861. He was reared during the trying days of the reconstruction period following the Civil War. His father lost his life while in the army. Dr. Henton attended the University of Mississippi and graduated from Southern Medical College at Mobile, Ala., in 1887, and entered the practice of medicine the same year. He was a man of charitable nature and covered many miles daily, never refusing to respond to a call regardless of climatic conditions. He was a member of the Baptist Church. Surviving are his wife, two daughters, four sons and a number of grandchildren. Funeral services were held at the Baptist Church at Decatur.

Dr. H. A Gant, of Columbia, Tenn., died on May 5, 1941, at the age of 89. He was a native of Columbia, born March 28, 1852. He lived long and he lived exceedingly well. He possessed great mental strength and was doubly fortified with medical integrity. It was an inspiration to know him and to talk with him. He was right in the front line with the few men who really discovered the mode of transmission of yellow fever. He really furnished the material that led to the conviction of the offending mosquito. Dr. Gant spent 32 of his best years in Mississippi. He served for four years as president of the Mississippi State Board of Health. He and doctor Willis Campbell knew each other and practiced at Jackson, Miss. Dr. Campbell left and went to Memphis at the suggestion perhaps of Dr. Gant. It is another coincidence that they both died the same night.

Dr. Gant was the last of a large family. Mrs. Mary Lou Rainey Gant, who survives him, is the only one living of a large family. She is a lovable personality and a woman of great mental power. It was a great inspiration to see them well mated, happy together, and interested in the march of civilization. This journal offers its deepest sympathy to Mrs. Gant and the two sons. The editor is happy to have been numbered them among his friends.

OFFICERS ELECTED AT MISSISSIPPI STATE MEETING

In addition to the changes made in the roster on page 43, the following places were filled as follows:

Delegate to A. M. A.—J. P. Wall, Jackson.

Sixth District, State Board of Health—H. L. McKinnon, Hattiesburg; J. P. Culpepper, Hattiesburg; E. A. Trudeau, Biloxi.

Seventh District, State Board of Health—L. W. Brock, McComb; A. B. Harvey, Tylertown; Sam Field, Centreville

Eighth District, State Board of Health—John B. Howell, Canton; Lawrence Long, Jackson; J. A. K. Birchett, Vicksburg.

Alternate for Underwood for A. M. A.—Gus Street, Vicksburg.

Alternate for Elected Delegate — W. W. Crawford, Hattiesburg.

Delegate to Alabama—H. Lowry Rush, Meridian.

Delegate to Louisiana—Charlie Catchings, Woodville.

Delegate to Arkansas—John Lucas, Greenwood.

Delegate to Tennessee—W. H. Anderson, Booneville.

DR. H. LOWRY RUSH

Meridian, Miss.

Dr. H. Lowry Rush, of Meridian, president-elect of the Mississippi State Medical Association. He is a native of Meridian, born July 16, 1897. He received his high school education at Meridian, his B.S. degree and two years in medicine at the University of Mississippi. He received his M.D. degree from the University of Pennsylvania in 1921, and later took post-graduate work in Europe in 1925.

Dr. Rush married Miss Mary Geneva Hutson, of McCall Creek, Mississippi, and they are the happy parents of two sons, Lowry, Jr., age 15, and Hack, age 8.

He, with his brother, Dr. Leslie Rush, and his mother, Mrs. J. H. Rush, operate Rush's Infirmary and Rush Brothers' Clinic.

He is a fellow of the American College of

Surgeons and the Southeastern Surgical Congress, a past-president of the Mississippi State Hospital Association. He has served on the council of the Mississippi State Medical Association since 1934. He is a steward in the Methodist Church and a director in Citizens' National Bank.

Dr. Lowry Rush is courtly and pleasing in manner, immaculate in appearance, studious in habit, professional in attitude, prophetic in medical vision, and missionary in devotion to everyday practice. He will serve well the interest of the medical profession during his tenure in office.

THE SCRIBBLER'S COLUMN

The writer had hoped to secure short articles from the medical staff at Camp Shelby for publication. However, Major George E. Leone, Chief of Surgical Service, states that this is next to impossible since all such articles must be submitted through repeated channels before approval is given.

* * * *

Major Leone is a kind and gracious host. It is well worth one's while to drop in at the Station Hospital and see the set-up.

* * * *

Two hundred x-ray films had been made the day the writer visited Camp Shelby Hospital.

* * * *

Excision of varicose veins of the legs is the optimum treatment provided the deep collateral circulation is adequate. Injection therapy has failed to stand the test of time.

* * * *

The immediate past-president of the State Medical Association is to be commended for continuing his campaign for a better understanding between the laity and the profession. As the demands of the War Department make doctors in civilian practice more scarce, the greater the need for harmony and respect between layman and the doctor.

* * * *

Sulfaguanidine, a sulfonamide, indicated in bacillary dysentery, is now on the market.

* * * *

An unexplained rapid pulse with low grade temperature in an adult is an indication for a chest roentgenogram.

—S. A. H.

EXHIBITORS

At our state meeting in Biloxi we had an unusually fine list of exhibitors, both scientific and commercial, both local and out of state. We appreciate each and every one of them. Both types of exhibits were very educational, the commercial exhibits help on expenses of the association. We hope the number will still be larger next year. We think it will. The association selected an exhibit committee at its last meeting to have charge of same. This committee is listed in the journal. No one thing will add more to the value of our meetings than scientific exhibits. They teach impressively. One of especial interest since the general practitioner dreads the subject, was the one on dermatology. Dr. R. W. Hall, Jr., of Jackson had it in charge. We are delighted to see this well equipped young man come back home and help us on this difficult, but important subject.

Following is a complete list of all exhibitors that had a display at Biloxi on May 13, 14, 15. We thank each and every one:

Scientific Exhibits

No. 10. Dr. Street (Miss L. Espenan)—Vicksburg, Mississippi.

No. 16. Dr. Long (Dr. Lawrence Long)—Jackson, Mississippi.

No. 17. Dr. Snelling (Dr. M. M. Snelling)—Gulfport, Mississippi.

No. 21. Drs. Hall & Thompson (Dr. R. W. Thompson)—Jackson, Mississippi.

No. 23. Dr. Neal Owens (Dr. Vincent)—New Orleans, Louisiana.

No. 24-25. Dr. M. Adams (Dr. M. Adams)—Memphis, Tennessee.

No. 31. Dr. Rush (Dr. L. V. Rush)—Meridian, Mississippi.

Commercial Exhibits

No. 1. American Surgical Company (F. A. Forbes)—Jackson, Mississippi.

No. 2. The Borden Company (W. A. Lewis)—New York, Chicago, and Los Angeles.

No. 3. Holland Rantos Company (W. W. Allen)—New York, Chicago, and Los Angeles.

No. 4. E. L. Mercere Company (Claude Runnels)—Memphis, Tennessee

No. 5. Mead-Johnson Company (E. F. C. Payne)—Evansville, Indiana.

No. 6. J. B. Lippincott Company (J. L. Rosecrants)—Philadelphia, London, Ontario.

No. 7. A. S. Alice Company (Arch Halsall)—St. Louis, Missouri.

No. 8. E. R. Squibb Company (R. Burst)—New York, New York.

No. 9. John Wyeth Company (W. E. Hardiman) (A. T. Knecht) (M. Holliman)—Philadelphia, Pennsylvania.

No. 11. Eli Lilly Company (W. E. Rogers) (F. H. Lowe)—Indianapolis, Indiana.

No. 12. General Electric X-Ray Company (F. H. Spicer) (L. T. Ward)—Chicago, Illinois.

No. 13. Kay Surgical Company (M. Brunson)—Memphis, Tennessee.

No. 18. Carnation Company (C. E. Maley) (T. L. Cook)—Milwaukee, Wisconsin.

No. 19. Lederle Laboratories (J. J. Cerniglia)—New York, New York.

No. 20. Dick X-Ray Company (H. G. Owens)—Memphis, Tennessee.

No. 22. Nestles Milk Products (J. W. Clement)—New York, New York.

No. 27. Southern Surgical Supply Company (R. E. & A. J. Schneider)—New Orleans, Louisiana.

No. 28-29. Van Antwerp Aldridge Company (E. R. Skinner)—Mobile, Alabama, double space.

No. 30. McKesson-Robbins Company (J. G. Box) (R. L. Burroughs)—Birmingham, Alabama.

No. 32. E. J. Hart Company (C. C. Nifong)—New Orleans, Louisiana.

No. 33. Surgical Equipment Company (H. C. Loposer)—New Orleans, Louisiana.

No. 34. Petit Jean Springs Company (Dr. Hardison)—Morrilton, Arkansas.

No. 35. J. A. Majors Company (J. C. Hancock, Jr.) New Orleans, Louisiana.

RESOLUTION

WHEREAS, Dr. Harris Allen Gant, of Columbia, Tennessee, formerly of Water Valley and Jackson, Mississippi, departed this life Monday, May 6, 1941;

WHEREAS, Dr. Gant was born in Columbia, Tennessee, March 28, 1852, and at the age of three went with his family to live in Oxford, Mississippi, so that he was a citizen of both Tennessee and Mississippi, having spent the early years of his professional life in the practice of medicine in the state of Mississippi, and for twelve years, Dr. Gant was a member of the Mississippi State Board of Health, and served as president of the Board for four years;

WHEREAS, Dr. Gant was a princely gentleman, an accomplished physician, and loyal friend; the outstanding work that characterized his professional career in Mississippi was his handling of epidemics of yellow fever at different periods, his principal achievement in connection with yellow fever being during the Orwood epidemic in Lafayette County in 1898, in collaboration with Dr. H. M. Carter, Surgeon, United States Public Health Service, being an accurate record of the length of time required by the disease to develop in a person after being infected, this being the first progressive step in what was to be a victorious war on yellow fever, and from which data Dr. Carter made certain observations, the importance of which can scarcely be overestimated, for upon this basis was determined the theory of the extrinsic incubation period of yellow fever, antedating by two years and making possible the discoveries for which Walter Reed is now known the world over; therefore be it

Resolved, That the Mississippi State Medical Association in convention assembled May 13, 1941, in the death of Dr. Gant has sustained an irreparable loss, and that we do express our deepest sorrow at his going; and be it further

Resolved, That a copy of this resolution be spread upon the minutes of the Mississippi State Medical Association, a copy given to the MISSISSIPPI DOCTOR and the press, and a copy sent to his devoted wife and family.

P. W. ROWLAND, Chairman.
FELIX J. UNDERWOOD,
G. S. BRYAN.

FOR SALE: One Bausch & Lomb, triple nose piece, mechanical stage microscope; one P & S bookkeeping system (McCaskey), and one gas office sterilizer. — Dr. F. E. Barr, Starkville, Miss.

FOR SALE: One set of treatment room furniture, Allison's walnut. In excellent condition, used only about six months. Also microscope, sterilizer and other equipment. Write Mrs. Earl Kaigler, Shaw, Miss.

Mississippi State Medical Association

Organized 1867

Next Meeting: May, 1942, Jackson

Officers

President—A. Street, Vicksburg
President-Elect—H. Lowry Rush, Meridian
Vice-Presidents—B. B. O'Mara, Biloxi
H. C. Sheffield, Biloxi
T. H. Rayburn, Pontotoc

Secretary—T. M. Dye, Clarksdale
Editor—Lawrence W. Long, Jackson
Historian—Leon S. Lippincott, Vicksburg
Speaker—J. Rice Williams, Houston
Treasurer—E. Leroy Wilkins, Clarksdale

Council

First District—J. W. Lucas, Moorhead
Second District—L. L. Minor, Rt. 4, Memphis, Tenn.
Third District—R. B. Caldwell, Baldwyn
Fourth District—J. K. Avent, Grenada
Fifth District—Lawrence W. Long, Jackson
Sixth District—Lamar Arrington, Meridian
Seventh District—J. P. Culpepper, Hattiesburg
Eighth District—W. H. Frizell, Brookhaven
Ninth District—D. J. Williams, Gulfport

Committees

Public Policy and Legislation:

Felix J. Underwood, Jackson
Henry Boswell, Sanatorium
W. H. Anderson, Booneville

Constitution and By-Laws:

H. Lowry Rush, Meridian
W. H. Frizell, Brookhaven
W. W. Crawford, Hattiesburg

Budget and Finance:

J. P. Wall, Jackson
J. B. Howell, Canton
J. S. Hickman, Meridian

Exhibits:

Dr. D. W. Jones, Jackson
Dr. Leon S. Lippincott, Vicksburg
Dr. W. H. Anderson, Booneville

Component Societies

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	W. R. Brumfield, Gloster	Anderson Butler, Liberty	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. A. Slack, Friars Point	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	C. A. Kirk, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. E. Johnston, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	Eugene A. Bush, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	H. L. Scales, Jr., Starkville	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	C. E. Catchings, Woodville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

EYE

THE RELATIONSHIP BETWEEN MYOPIA AND AVITAMINOSIS, Joseph Laval, M.D., *American Journal of Ophthalmology,* Vol. 24, pp. 408, April, 1941.

This most worth while article discredits the promiscuous use of vitamins in all types of ophthalmological conditions. The article states that (1) the use of vitamin-B complex in cases of toxic amblyopia (alcohol-tobacco) as reported by Carroll and by Johnson, and in optic neuritis associated with pellagra as reported by me and (2) the cure of keratomalacia, xerophthalmia, and associated ocular conditions by the use of vitamin A in numerous instances all over the world, are the only decisive, definite, and incontrovertible evidences of cure with vitamins in ophthalmology. The author quotes previous articles written and goes on to show that there is no definite evidence that a lack of vitamin D is the cause of ocular pathology. Also in quoting, mention is made that the chemical structure of vitamin D has a close similarity to some carcinogenic hydrocarbons, and that several deaths in children have been due to an over dose of vitamin D. There is definite evidence that the lack of vitamin A does produce pathology in the eyes and that it is possible for keratoconus to be produced experimentally in animals very easily on a deficient vitamin A diet. The procedure recommended by the editor in treating cases of myopia is to place the weakest minus lens that gives normal vision in each eye separately under cycloplegia. The patient is instructed to use these glasses only for their near work, at movies or when driving an automobile and should not use them for distant vision any other time unless the vision is so poor that it is absolutely necessary. He feels that in not allowing the patient to use her glasses for distant use unless absolutely necessary, the ciliary muscle is kept active. and also the weakest minus lens keeps the ciliary muscle active when using the eyes for close work. Close work should be kept at the minimum, which is compatible with the amount of work the patient has to do. The general health, of course, is to be kept at its highest level.

COMMENTS: I am sure that most men practicing medicine today are convinced that we are all using too many vitamins indiscriminately because of the detail men of drug firms, and the many articles on vitamins in our medical journals. It has been proved that over dosage of vitamin D is injurious to both children and adults. The author's procedure in treating patients with myopia is most sound, although many men advise correcting the myopia to where the patient gets her best possible vision and advises her to wear her glasses all the time.

—S. S. McN.

DIFFERENTIAL DIAGNOSIS OF THE PHORIAS, by Dr. T. H. Prangen, Transactions American Academy of Ophthalmology and Otolaryngology, March, April, 1941, page 60.

As in any other field of medical diagnosis, experience widens the limits of normal and narrows the limits of that which is actually pathologic, excluding definite strabismus and obvious deviation of the eyes; the essayist states that any state of extra-ocular muscle balance which causes a person no discomfort is normal for that individual. This general theme of avoiding unnecessary interference is a cardinal point of view in the intelligent practice of medicine.

In spite of this philosophy, there must be certain rules of some indicative of so-called normal in the diagnosis of conditions of the extra-ocular muscles. Certain comprehensive data must be collected concerning the position of the eyes, positive and relative, in action and at rest. Their mobility and motility must be studied. The powers of duction, or vergence, must be determined. Accommodation, refraction and vision fusion and stereopsis are evaluated. Muscle diagnosis consists in the weighing of one set of data against another, trying to figure out the existing relationships and their composite significance.

It is essential that the phorias be determined both for distant vision and for near vision so that these values can be compared. It is said that for distant vision a low degree of esophoria, 1 to 3 prism diopters is normal. In near vision, an exophoria of 5 prism diopters is regarded as normal. Physiologically, when the eyes look from near objects into the distance, the diverging mechanism is dominant, and the converging mechanism is recessive. In contrast, when the eyes change from distant vision to near objects, the converging mechanism dominates and the diverging mechanism is recessive.

Therefore, we have insufficiencies and excesses of divergence and convergence established as definite diagnostic entities.

In studying phorias we break up binocular fixation and allow the eyes to assume positions of rest whereas in the study of vergence, we permit biocular fixation to exist and study its maximum power to maintain single binocular vision.

When prism convergence and divergent powers have been obtained and these figures compared with the phoria data, one is usually in a position to forecast the diagnosis of lateral and vertical balance. The examination of the near point of convergence is considered as important or more so than the prism tests.

In the diagnosis of muscle imbalance it is important to remember that immediate diagnosis is not essential and that repeated observations over a period of time are most useful in establishing correct diagnoses. The findings in a given case, and their diagnostic significance, often change with repeated observations.

Comment: Careful muscle testing is one of the many features which ophthalmologists offer as part of their service. In the commonwealth of Mississippi there are still many physicians with excellent rural practices, who do not hesitate to refer their cases with diseased eyes to ophthalmologists, but who often do not stress the difference between ophthalmologists and the "glass fitting doctors"—optometrists, when lenses are required.

Recently, a physician brought his son, age 12, in for examination because of a "crick in the neck." The father had been giving mild punishment because the child had insisted on leaning his head to the side which he had diagnosed as a "habit." Examination failed to reveal cervical pathology but investigation of the eyes showed near-normal vision but a 5-degree vertical muscle imbalance. Since correction, the child has carried his head erect. This case serves to show how such conditions are often overlooked and indeed sometimes derided as being "too impractical."

—A. C.

PEDIATRICS

Antepartum Use of Vitamin K, George P. Hohlender, William M. Rosenbaum, and Earl C. Sage, *The Journal of the American Medical Association,* 116:16 (April 19, 1941).

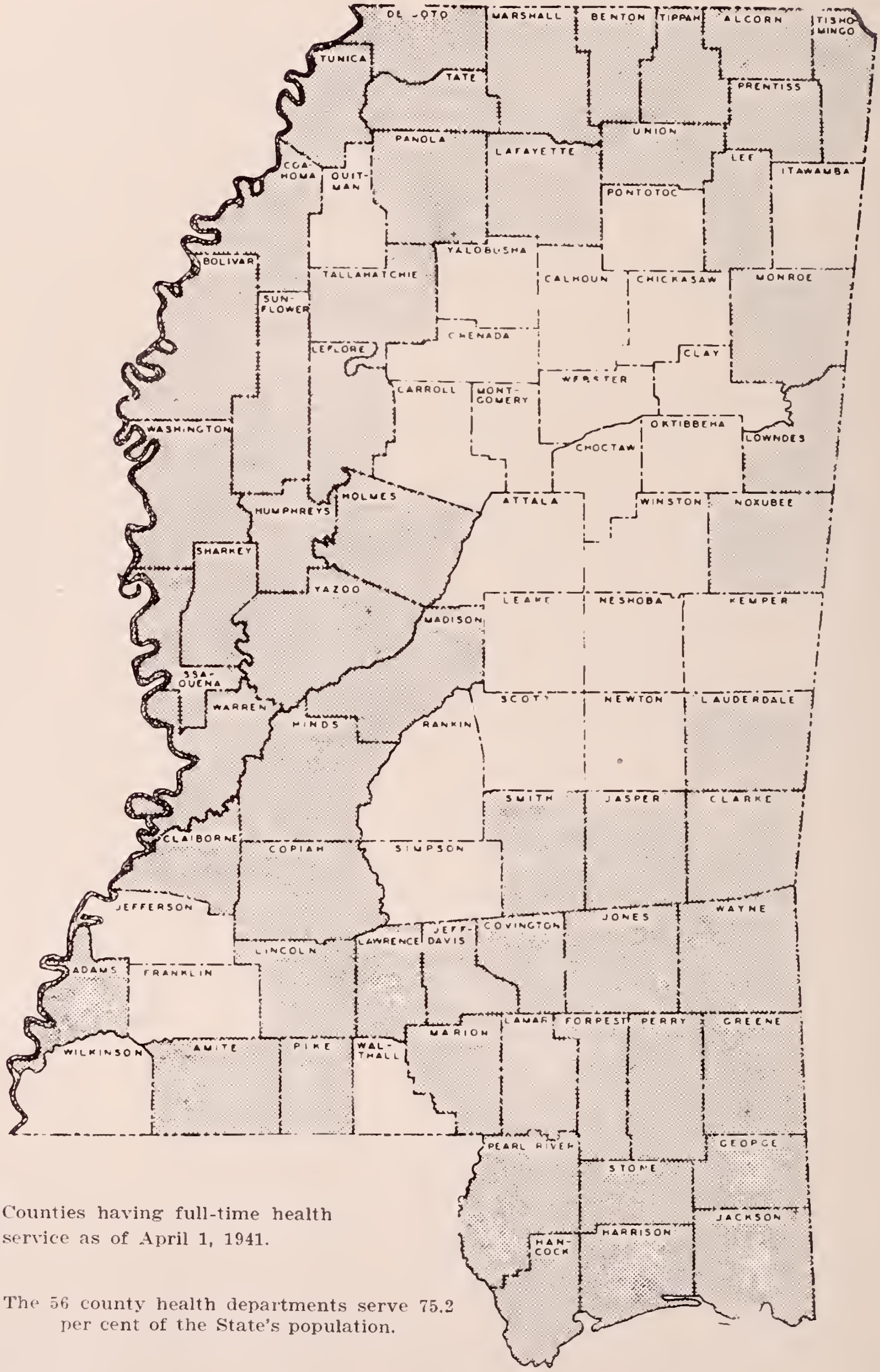
The authors show that infants normally have a considerable rise in prothrombin time during the first week of life. It is evident, therefore, if we are to prevent hemorrhage in the newborn, that it will be necessary to give vitamin K to the mother before delivery if possible; but, if not given then, it should be given to the baby immediately after delivery. They advise giving a vitamin K preparation intravenously to the mother before delivery and indicate that this is essentially the same as giving it in like manner to the newborn baby. It is stated that "the time of administration of vitamin K makes no apparent difference in the results obtained, as vitamin K effectively controls the prothrombin level of newborn infants during the first week, regardless of the time of administration to the mother before delivery." It is stated that vitamin K has no gross toxic effects on the baby during the first week of life and that vitamin K preparations used in treatment effectively and rapidly reduce the prothrombin time.

Since it is so effective in small doses, it is easily given intravenously to the infant by way of the maternal blood stream, and since it is not toxic, the authors urge that it should be given routinely as a prophylactic measure "(1) when the infant is likely to be premature, (2) if labor is prolonged and (3) if operative delivery of any type is anticipated."

Comment

The essayists, along with many others, advocate the use of vitamin K in the prevention of the hemorrhagic disease of the newborn. This abstract should be carefully read and the suggestions by the authors for its use instituted in every doctor's practice in this state at once. There is no doubt but that many deaths can be prevented in the newborn if all the physicians who are doing obstetrics would administer vitamin K in some form, either orally or subcutaneously, routinely to all pregnant women shortly before delivery.

Progress In Full-Time Health Work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CHICKASAW
MONROE
SUNFLOWER
GRENADA
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MONTGOMERY
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OKTIBBEHA
LOWNDES
CHOCTAW
HOLMES
ATTALA
WINSTON
NOXUBEE
HUMPHREYS
SHARKEY
YAZOO
LEAKE
NESHOBA
KEMPER
MADISON
ISSAQUENA
WARREN
SCOTT
NEWTON
LAUDERDALE
HINDS
RANKIN
SMITH
JASPER
CLARKE
CLAIBORNE
COPIAH
SIMPSON
JEFFERSON
JONES
WAYNE
LAWRENCE
JEFF-DAVIS
COVINGTON
LINCOLN
ADAMS
FRANKLIN
LAMAR
FORREST
PERRY
GREENE
MARION
WILKINSON
AMITE
PIKE
WALTHALL
PEARL RIVER
GEORGE
STONE
JACKSON
HARRISON
HANCOCK

▨ Counties having full-time health service as of April 1, 1941.

The 56 county health departments serve 75.2 per cent of the State's population.

State Board of Health

Felix J. Underwood, M.D.

THE COMMUNITY'S FIRST LINE OF DEFENSE

(The full-time county health department)

Nothing is more important to the community's health security, to say nothing of its health opportunities, than to have access to the invaluable services of a full-time local health department. Headed by a staff of competent physicians, nurses, inspectors and clerks, no amount of occasional service rendered by a distant agency can substitute for its continuous, efficient service. "Because it *is* local, it is a part of the local community life and is well adapted to local conditions." It is the individual's first line of defense against disease and has been an important factor in raising the level of health in many counties.

Back in 1877 when the Mississippi State Board of Health was created, public health activities were regarded more or less as temporary procedures, not to be called into play except in the face of epidemics or other emergencies. Hence, the value of full-time services was not apparent to the general public. As a consequence, public health stood at the crossroads of opportunity for a long time, awaiting a public awakening of the possibilities of preventing disease and promoting health through well-organized local health service.

Local health work in Mississippi received its first impetus in 1910 when the Rockefeller Foundation granted funds for the launching of an intensive campaign against hookworm. Thousands of children were treated and cured of the disease, great numbers of sanitary privies were constructed, and the people were stirred as never before regarding the wisdom of sanitation and disease prevention. Then in 1914 a campaign against typhoid fever was initiated in coöperation with the United States Public Health Service, the results of which proved very gratifying. Thus the interest and coöperation of the public were steadily increased and maintained over a period of years as the fruits of public health effort became more clearly demonstrated. Harrison County was the first to establish full-time health services in Mississippi. This was in 1917, making the county health movement in the state now 24 years old. Dr. D. J. Williams was the first full-time county health officer and still serves in Harrison County.

Other counties slowly followed, but lack of trained personnel and inadequate appropriations made it impossible for many of the counties to keep step with existing scientific knowledge and public health procedures. Federal, state and local government bodies were not aroused to the importance of spending funds for vital health services until recently; notwithstanding, the proportion of the tax dollar allotted to health conservation has been exceedingly small in relation to other vital community services and in further consideration of the dividends which can be expected from expenditures for health work. Unfortunately, many counties seemed financially unable to assume responsibility for needed expenditures for health services, even though the ultimate returns from such expenditures could be clearly predicted. Better health education of the people soon increased the demand for these services and this in turn had its effect on increasing the allotment of funds for the work. Enlightened citizens lost little time in pointing out that health service is just as essential to the peace, happiness, security and comfort of the citizenship as are adequate educational or law-enforcing facilities.

The provisions of the Social Security Act have given greater impetus to the development of local health departments than almost any other single factor. During the past five years the number of full-time counties in Mississippi has been doubled, with 56 counties now organized and serving 75.2 per cent of the state's population. Greater enlistment of citizen participation, advancement of standards for personnel and services, and general enlargement of programs have marked this steady growth of health services.

Working hand in hand with public health workers in achieving the objectives of the health department have been the ever-faithful members of the medical profession. Together, they have administered the principles of preventive medicine in a manner which well demonstrates the good which may be accomplished through unity of effort and experienced leadership.

Illustrative of services rendered through the full-time health departments in Mississippi is the following tabulation:

Accomplishments in Full-Time Counties
1940

469,963	treatments for venereal diseases were administered
5,276	individuals received x-ray examination for tuberculosis
137,724	individuals were immunized against typhoid fever
47,690	individuals were immunized against smallpox
32,855	individuals were immunized against diphtheria
428,664	linear feet of minor drainage were completed
17,166	new privies were installed
8,497	maternity cases were given health supervision
42,787	school children were given physical examination
154,083	laboratory examinations were made for syphilis.

Public health has had a dramatic history, yet scarcely more than a good beginning has been made in applying the knowledge which science has given for preventing disease and promoting health. Such diseases as tuberculosis, pneumonia, cancer, malaria, mental and nervous disorders, diseases of old age, malnutrition, etc., are far more prevalent than they need be, in the light of protective measures recently developed. Continued health progress will depend upon the intelligent use and application of this knowledge. The work which lies ahead is truly a job for all and there can be more justification in resting upon our laurels when there has been made available to all of the people the full benefits of modern preventive medicine and sanitation.

* * * *

Developing National Fitness

Provisions are being worked out for the treatment of all Selective Service registrants who are found to have syphilis, marking another step in the plan to make the nation strong by building physical fitness. The program in Mississippi is a coöperative one, involving the assistance of the Selective Service System, the United States Public Health Service, Medical Corps of the United States Army, the state and local health departments, and private physicians.

Those able to pay for treatment should be treated by a private physician, but those unable to pay should be referred to a public clinic. It is the responsibility of the health departments and private physicians to see to it that the selectees having syphilis are provided with treatment, regardless of economic status.

Approximately 800 have already been placed under treatment in the clinics of the state, but there is no record available as to the number receiving treatment by private physicians. The importance of immediate treatment of these cases cannot be overestimated. Checking the disease now may be the means of making these individuals fit for military service later. There is no time to lose in developing national fitness. Fitness is strength!

* * * *

New Books in the Library

A. P. H. A.—*The Control of Communicable Diseases,* 1940.

A. P. H. A.—*Swimming Pools and Other Public Bathing Places,* 1940.

A. P. H. A.—*Diagnostic Procedures and Reagents,* 1941.

Castiglioni, Arturo—*A History of Medicine,* Knopf, 1941.

Colcord, Joanna C.—*Your Community: Its Provision for Health, Education, Safety,* Russell Sage, 1941.

Foote, J. A.—*State Board Questions and Answers for Nurses*, Lippin., 1941.

Fassett, N. C.—*A Manual of Aquatic Plants,* McGraw-Hill, 1940.

Healy and Alper—*Criminal Youth and the Borstal System,* Commonwealth, 1941.

Hjelte. George—*The Administration of Public Recreation,* Macm., 1940.

Joslin, E. P.—*A Diabetic Manual,* Lea & Feb., 1941.

Jensen-Nelson, Kathryn L.—*Massage in Nursing Care,* Macm., 1941.

Merck & Co.—*The Merck Manual,* 1940.

Merck & Co.—*Annotated Bibliographies—ZPO, Pantothenic Acid, Ascorbic Acid, Sulfanilamide,* 1941.

Merck & Co.—*Physiologic Activity and Clinical Use of Riboflavin,* 1941.

Proceedings of the Dental Centenary Celebra-

tion, Waverly Press, 1940.
Proceedings of the National Conference of Social Work, Columbia Press, 1940.
Schaub and Foley—*Methods for Diagnostic Bacteriology,* Mosby, 1940.
Sigerist, H. E.—*Medicine and Human Welfare,* Yale, 1941.

County Societies

ALCORN COUNTY

The next Alcorn County Medical Society meeting will be at 6:30 P.M., Waldron Hotel, June 20. The program:

"Leukorrhea, Diagnosis and Treatment"—J. H. Hughes.

"Hare Lip and Cleft Palate"—J. T. Davis.

At the last meeting the society volunteered to furnish first aid instructors for local groups. This was in coöperation with the American Red Cross which seeks to improve the national civilian defense mechanism by informing laymen on first aid methods.

DESOTO COUNTY

Dr. William H. Anderson of Booneville, Mississippi, president of the Mississippi State Medical Association, called the meeting to order at 9 A.M. Tuesday, May 13, 1941, at the Pavilion of the Buena Vista Hotel, Biloxi, by the sea. The weather was propitious, the attendance was excellent and if the program in its entirety would have been one-half as good as it was, it would still have been good.

The President's Message, "The Challenge to the Medical Profession," was indeed timely and strongly worded. It is printed elsewhere in this publication and deserves careful reading.

It is seldom that one can have the privilege of seeing and hearing two men of such intellect and achievement as Drs. Rudolph Matas and W. A. Evans, both loyal sons of the South but country-wide in their helpfulness and sympathy for mankind.

In introducing Dr. Matas, Dr. Evans referred to him as his "barbasheely," a word once used oftener than now, meaning a confident or true and loyal friend. Dr. Evans' introduction and Dr. Matas' "Dr. Ewing Fox Howard Oration" and following remarks were indeed magnificent. If you had gone to Biloxi and heard only these gentlemen, your time and expense would have been amply repaid.

At the second public meeting Wednesday night Drs. Seale Harris, of Birmingham, and Lawrence T. Lowrey, of Blue Mountain, were the speakers. Both of these gentlemen are members of Southern families that have been of tremendous value for good in this section; their ancestors, as well as themselves, have wrought well and their lives and benevolent deeds will be of much benefit to many people for generations to come. Dr. Harris' complimentary remarks on the State Association and its members include some scientific reflections; and Dr. Lowrey, the college president and educator, enlivened the occasion with reflections that were completely enjoyed by all. We think the innovation of having two public meetings is good and in this we are joined by all those we heard express themselves.

In selecting the chairmen of the respective sections, President Anderson chose well; Drs. T. Paul Haney, D. W. Hamrick, V. B. Philpot and A. H. Little had essayists of merit and their discussions thereof were in order.

Biloxi, by the sea, is the oldest place of habitation in the state. Best of highways, efficient accommodations, fine homes and hotels and the delightful salty sea breezes make an excellent impression on those from other sections.

Beautiful Beauvoir, the home of the Honorable Jefferson Davis, is now a shrine and if you ever pass along the coast be sure to visit it.

There are now only two veterans who live there, one over a hundred years and the other slightly younger. Those brave soldiers who wore the gray and fought under the Stars and Bars so valiantly "have crossed over the river and rest under the shade of the trees." To make Mr. Davis' home a shrine was a most appropriate act.

Someone has said that the best time to train a child is to begin with its great grandparent back in the ancestral line. In discussing a paper H. F. Garrison said, "The proper time to treat congenital syphilis is to treat the mother before the child is born."

The commercial exhibits were good and the doctors seemed interested in looking over their exhibits.

The booth of the Selective Service was well arranged, the enchanting lady in charge was very courteous.

Several army doctors were present among whom were Major G. E. Leone, New York, chief of surgery at Camp Shelby and Dr. Buford Word, Mississippi, who brought out some interesting operations of the medical center at Camp Shelby. Lieutenant Colonel R. H. Eanes, assistant chief of the medical division of the Selective Service brought the thanks of General Hershey, chief of the Selective Service, Washington, for the fine spirit the physicians are displaying. Colonel Thomas L. Ferenbaugh, chief medical officer at Camp Shelby, Dr. Leonard G. Rowntree and our own Major Lawrence W. Long and others were present and took part in the deliberations. Dr. Rowntree spoke of the overall shortage of doctors in the United States in normal times and now the present preparedness program makes this shortage more serious.

The Camp Shelby Hospital has 2000 beds and is set up for a 2600-bed capacity; there are more than 300 doctors on duty with field units and hospitals there.

"The necessity for continuation of a statewide plan for hospitalization of the indigent in its present form, the importance of getting over to the people the need for more general hospital insurance and the part our hospitals will have in the program of national defense were discussed at the meeting of the Mississippi State Hospital Association. Dr. Eugene R. Nobles, of Rosedale, retiring president, also stated, "It is therefore evident that young men are not locating in the state fast enough to replace those who, because of age or other disability, are being forced to limit their professional activities."

We heard others speak favorably of an article by Dr. R. D. Caldwell, of Baldwyn, on the "Care of the Aged and Infirm." This paper was discussed at length.

Dr. R. N. Whitfield, of Jackson, again urged the necessity of complete and accurate reports of all births and deaths, so that the state vital statistics would be made more reliable.

Dr. Seale Harris said, "There are a hundred times as many vitamins prescribed as there are indications for their use." He said that vitamins should be obtained in food and that expensive, synthetic vitamins are valuable only in emergencies. Dr. Harris in corroboration with his son, Dr. Seale Harris, Jr., has recently written a book on one of the vitamin deficiency diseases, pellagra, and it is interesting to find him saying that there has never been a case of pellagra cured with yeast, nicotinic acid, liver, or anything else, without improvement in all items of the patient's intake."

He also spoke of the harmfulness of devitaminized flour, *et cetera.*

A muchly discussed paper was, "The Role of Vitamin K in the Etiology, Prevention and Treatment of Hemorrhage in the Newborn Infant," by Dr. W. W. Waddell, Charlottesville, Virginia. As we get it, by feeding vitamin K to the mother before parturition, and to the newborn infant, this raises the maternal prothrombin, the substance used to stop hemorrhage in newborn infants. This vitamin production of prothrombin is necessary for proper blood clotting. Other hemorrhagic disorders are not associated with low prothrombin values, as hemophilia, and are not benefited by vitamin K.

Dr. George T. Pack, New York, a distinguished surgeon, read a classical paper with pictures on "The Management of Metastatic Cancer in the Groin."

A well thought out paper on "Significance of Upper Gastro-Intestinal Studies" was well read by Dr. Lucian Minor Ferris, of Vicksburg. Even with its title, Dr. Ferris had an interesting, comprehensive and scholarly essay.

Jackson is the place for the next meeting, a logical selection. Dr. H. L. Rush was chosen president-elect. We all know that Dr. Rush lives in Meridian.

The Woman's Auxiliary held its eighteenth annual convention, evidently they had a happy time and a profitable meeting. Many social features were arranged for them. Someone has said, "It takes a hundred men to make an encampment but one woman can make a home." Women are so much better than men that their faults are considered greater though far less in number.

To chase the clouds of life's tempestuous hours,
To strew its short but weary way with flow'rs,
New hopes to raise, new feelings to impart,
And pour celestial balsam on the heart;
For this to man was lovely woman giv'n,
The last, best work, the noblest gift of Heav'n.
—Thomas Love Peacock's *The Vision of Love*

* * * *

DR. WILLIS C. CAMPBELL

Dr. Willis Campbell is dead. He was born in Mississippi and numerous friends live in this state. His death brings sorrow to the exalted and the lowly at heart. Democratic and pleasant to all, he was a gentleman, active in all good works, skillful in his chosen profession, a true friend. The world will be a better place because he lived and wrought.

An honest man, close-buttoned to the chin,
Broad cloth without, and a warm heart within.—COWPER.
He was a man, take him for all in all,
I shall not look upon his like again.
—SHAKESPEARE.

* * * *

THE DOCTOR'S THERE

When in the cottage blessed with Love's sweet store
A babe is born and o'er the rustic door
Is hung the crown of motherhood, and fair
Is all within—the Doctor's there.

When 'neath the pall of mystic Death's weird spell
A mother's heart is broken by the knell
Of all that's dear, and on the stair
No baby feet—the Doctor's there.

When virtue flees and breath of ruthless lust
Eats into the soul as does the gnawing rust,
When no one else with her the shame will share,
With mother's touch—the Doctor's there.

Where blossoms Life's sweet Bud at blush of day,
Where breath of withered rose at eve-tide steals away
On the South wind—in joy and care,
An uncrowned king—the Doctor's there.
—L. B. MCBRAYER, M.D., Asheville, N. C.

* * * *

In times of direst stress, great men have a tendency to lean on poetry for solace and comfort. The poet lives a weary, thankless life. His poetry lives on and helps people withstand suffering. It was part of a poem which President Roosevelt sent as a greeting to Prime Minister Churchill of England with Wendell Willkie as the messenger. Churchill recited the poem in a world address; and a few weeks later, making another historic address, again he quoted poetry to hearten his people.

A song, a poem. a line from a book—these are the surest balms for a suffering soul.

* * * *

"Witness," said the attorney, "was it this man's habit to talk to himself when alone?" "Jest at this time," was the answer, "I don't recolleck ever bein' with him when he was alone."

Patriotic women will continue holding "high teas" in this season in spite of the tax, if they have sufficient "grounds" for them.

* * * *

A patent has been applied for, combining a toothbrush with a dental mirror on its head which enables the user thereof to observe an enlarged image of his teeth when he brushes them.

Pantothenic Acid—L. W. McElroy and Dr. Harold Ross (University of California) examined the contents of 20 to 30 cows and sheep and found that they contained more pantothenic acid than was in the feed. The conclusion is inevitable that animals make their own pantothenic acid. The acid is of importance because without it life seems to be impossible. They had previously found that sheep and cows can make their own vitamin K as well as riboflavin, pyridoxine and thiamin, all members of the B complex.

Rt. 4, Memphis, Tenn. L. L. Minor,
May 20, 1941. Editor.

Woman's Auxiliary
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THE DOCTOR'S WIFE IN MEDICINE*

MRS. F. S. DIXON,
Natchez, Miss.

When one approaches such a subject as "The Doctor's Wife in Medicine," one must automatically take into consideration the fact that one's idea of the ideal and Mrs. George Crile's, for example, would of necessity be different. However, just as doctors differ, so do their wives, and it seems to me that the variance in wives is far more understandable, or excusable, if you think an excuse necessary, than the imperfections to be found in doctors. There is no pattern for or degree awarded to doctors' wives. There is no oath taken to Aesculapius; the only vows are those given at marriage, and while each doctor is an M.D., not all doctors' wives come from any one class or profession. What each woman who marries a doctor works out for herself as her code will depend frequently on whether she was before her marriage a nurse, a technician, a secretary, a teacher, or a young lady untutored in professional ways.

For each doctor's wife there arise problems which are peculiar to being married to a doctor. Life, of course, gives us all problems, and tests our mettle soon enough, but without being snobbish, I really believe that the doctor's wife has a very different and often difficult role to fill. For example, if she has had no association with the profession, she must learn not to have medical talk offend her, for she will have to breathe and eat it. She must learn never to let the bad manners and frequent rudeness and crudeness of her husband's patients over the telephone, and even at her front door, offend or irritate her. She must learn to accept and try not to complain about her husband's irregular hours. She must steel herself never to be disappointed if he cannot keep social engagements. She must, above all, learn not to be jealous of her husband and his relations with his patients, nurses and office assistants. She must learn to try to be cheerful at all times, for all doctors have too many worries to welcome a recitation of household troubles when he finally arrives at dinner two hours late.

The problems of doctors' wives in a small town are somewhat different from those of the wives of men in larger cities, but human nature is much the same the world over, and one just gets a little more of a concentrated dose of the ugly sides of one's neighbors and associates in a smaller community where there are fewer interests and diversions, and where what Mrs. Jones was doing last night at two o'clock is more important and more significant than what is happening in Europe. Much that would pass unnoticed in a larger community becomes common meat for over-the-fence discussion in a smaller town. Therefore, it is especially important that a doctor's wife never gossip, for anything that she may say in all innocence may be passed on as her husband's opinion, and her every word about Mrs. Smith, no matter how charitably spoken, will be seized upon with avidity and twisted into something far removed from its original content. It is also important to remember that prescribing and diagnosing are not her business. A wife can be a good listener, and encourage patients to believe that she is as interested in their children's illnesses and their own complaints as her husband would be professionally; *but,* however good a listener she may be, she should never, never prescribe.

No matter what size community she lives in it is very bad form for a doctor's wife to haunt his office, or even visit it except when necessity demands. It frequently happens that a patient is driven away from a doctor she would prefer to consult because she does not care to find the doctor's wife in the office, curious as to what brings her there. Most people, while not furtive about visiting a doctor, prefer to think of him as their confidant, much as a minister or priest might be, and do not wish to encounter the female member of the family, who, sad to relate, is all too often too curious. Very few of us care to go even to a restaurant to have dinner and have the proprietor, or his wife, sit down with us, entertain us, and watch each mouthful of food we consume, asking as we attempt to chew: "How is the steak?", or "Are the biscuits good tonight?". Many a patient would trust a doctor with his or her life and yet frequently not trust him with a fact he would not consider repeating, just because his wife has a loose tongue, or is too much under foot. She can do her husband far more good at home than she ever can by frequenting his office. It is better, therefore, in this connection, never to ask questions of her husband. The less she knows about his patients, the better.

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*Read before the Adams County Medical Society, Ladies Night, May 20, 1941.

Another very essential thing to remember is that she is not her husband's publicity agent. If a doctor can "deliver the goods," he need not depend upon his wife to "promote" him. No doctor can have a better recommendation than the praise of a grateful patient. Does one ever hear of a furniture manufacturer whose furniture is good, depending on his wife to market it for him? It is one thing to acknowledge, gracefully, spontaneous praise from an outsider, and quite another to be forever boosting one's husband's stock.

When one lives in a small town it is wise to remember that so-called friends can be the enemies of the husband's success. It is very rare indeed that by running around incessantly, socially, the wife can enlarge her husband's practice. All too frequently the very fact that she knows people socially puts her husband at a disadvantage. There is, of course, a happy medium between a gad-about and a stay-at-home. No one advocates that a doctor's wife become a recluse, and a certain amount of social activity is an excellent way to keep her existence and that of her husband in the minds of the people in their community, but far greater advantages are to be gained from taking a normal interest in community affairs, church functions, impersonal clubs and civic organizations than from the entirely frivolous social affairs.

It is important that there be a comfortable home to which the husband can return at night; that his wife sees that he has nourishing food, as well as appetizing meals when he can come to them; that she should be there to greet him with a smile and a real welcome, than that she should spend all day socializing with Mrs. Astor, or patronizing Mrs. Gotrocks. It is far more important, too, that she try to eliminate her husband by showing confidence in *him* than it is for her to bring home the so-called social laurels. It is almost impossible, and nearly always damaging for any doctor, in a small town especially, to have any kind of social life. Diversion is essential, friendly association important, but no doctor can be a social lion *and* an able doctor's wife be the "belle of the ball," and at the same time keep the home fires burning.

If there are children, the wife's duty is even more to her home and her husband. No doctor can, with his irregular hours and lack of real home life, properly oversee his children. Therefore, in most instances, the training, education, manners and general well-being of the children come under the wife's supervision. This, next to caring for the well-being of her husband, should be her most important role in life.

* * * *

The foregoing is a pretty severe dose of the *dont's*. These are in no wise meant as personal. As most of you know, I worked for doctors for years, and finally have been married to a doctor for some years. I know all the *do's* and all the *dont's;* in other words, I know all the symptoms and recognize the syndrome, and yet at the same time also recognize that I am far, far from being the ideal, or classical case. The points I have tried to stress, as far as I know, are the main things that should be avoided by doctors' wives.

The characteristics all of us should try to develop and nourish are:

Tolerance—of the wives of our husbands' associates, friends and patients.

Tact—which as Sir James Barrie says of charm, is desirable above all else if you have it; if you haven't it, nothing else matters.

Silence—a doctor's wife should be seen, not heard and if she cannot be tactful, by all means she should be silent. This means, of course, silence as to her husband's business, patients and practice.

Cheerfulness—which I have already mentioned, is a God-given gift, but can be cultivated, and your own worries and annoyances should be pushed to the background, not dragged to the front every time your husband comes home, weary and depressed, anxious about some case, or at his wit's end as to what to do next for the *patient* who is running him ragged.

"Subscribe to the BULLETIN, the official publication of the Woman's Auxiliary to the American Medical Association; issued quarterly $1.00 year. Send subscriptions to Mrs. H. E. Christenberry, Highland Drive, Knoxville, Tennessee, or to the State BULLETIN Chairman, Mrs. John B. Howell, Canton, Mississippi."

A WREATH FOR THE DOCTOR'S WIFE

I have sung my song to the doctor
And richly he merits the praise;
But his wife, though equally worthy,
We forget, with her modest ways.

Without her how meager his mission,
How sordid and selfish his art!
No fountain of love overflowing
To freshen the tides of his heart.

How little life's infinite meaning
Without her to watch and to wait,
Their baby close-pressed to her bosom,
Her hand on the half-opened gate.

In moments of deepest dejection
When every endeavor is vain,
When science and skill are exhausted
And death is triumphant again,

How helpless the deftest of doctors,
Mere creatures of clay and of clod,
Till their wives through their warm inspiration
Thrill each with the gifts of a god.

How weary her hours of waiting
Through the dark and the desolate night!
How she pours out to God her petitions
To give to her doctor each fight.

She makes every call he is making.
Each patient he has is her own.
She shares each success and each failure.
She lives for his welfare alone.

I sing to the wife of the doctor.
Here is a wreath for her head.
She merits the proudest praises
Of all of the living and dead.

Her story may never be written
In letters of silver and gold;
But the doctor and I both adore her
And we know that her tale should be told.

God bless every wife of each doctor
Bring forth your frankincense and myrrh.
May every physician be worthy
Of the love of a comrade like her.

—David E. Guyton.

Blue Mountain, Mississippi.

THE NEW PRESIDENT

The new president has been busy the past year visiting auxiliaries and planning for her tenure of office in earnest. She has several ideas which she wants to see put into action, chief of which is promoting a definite auxiliary consciousness among doctors' wives.

Mrs. Stowers is a Canadian by birth, having been born and reared in New Brunswick. Deciding to prepare herself for the nursing profession, she went to Johns Hopkins Hospital in Baltimore, where she was graduated in 1928. Her career was curtailed by Dr. Stowers, whom she married shortly afterward.

Dividing her time between her house and three young sons, Mrs. Stowers knows all the joys and problems of the doctor's wife. She has an active interest in community affairs, giving time to clubwork and church activities. Zealous in whatever she puts her hand to do, we are confident she will guide the state organization wisely and well this year.

MRS. V. B. PHILPOT ELECTED PRESIDENT-ELECT

Mrs. V. B. Philpot, of Houston, was chosen president-elect of the Auxiliary in Biloxi last month. Since becoming a member of the organization she has shown great interest in and devotion to its endeavors. She has been memorial chairman, parliamentarian and historian during the past three years and made in each office an outstanding impression. She has also held the presidency of the Auxiliary to the Northeast Mississippi Thirteen Counties Society. We shall look forward to her leadership with confidence.

1941 SESSION MEMORABLE

A tea which was given by the Gulfport Auxiliary, of which Mrs. C. H. McCall is president, attested the gracious hospitality of the Coast. The tour of Beauvoir, home of Jefferson Davis, visited en route to the tea, was most worth while with Dr. W. A. Evans acting both as host and guide. State and Coast auxiliary officers received in the lovely garden of the Markham Hotel.

Featured by a message from Mrs. J. U. Reeves, Mobile, President-Elect, Woman's Auxiliary, Southern Medical Association, the annual luncheon was the climax of the 1941 session. The ladies of Ocean Springs and Biloxi, headed by Mrs. B. B. O'Mara and Mrs. J. J. Carter, arranged one of the most delightfully planned menus ever served the members of the Auxiliary. Then Mrs. Reeves' talk poignantly challenged doctors' wives to the duties of citizenship, self-enlightenment and faithfulness to their task.

A boat ride on the placid waters of the Gulf ended for us a happy vacation filled with gratitude to Coast doctors' wives for making our stay memorable indeed.

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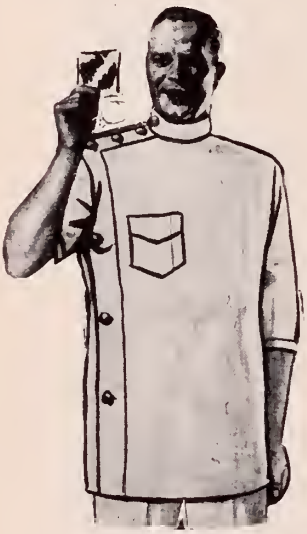

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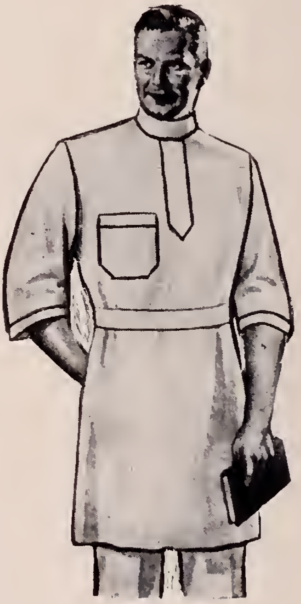

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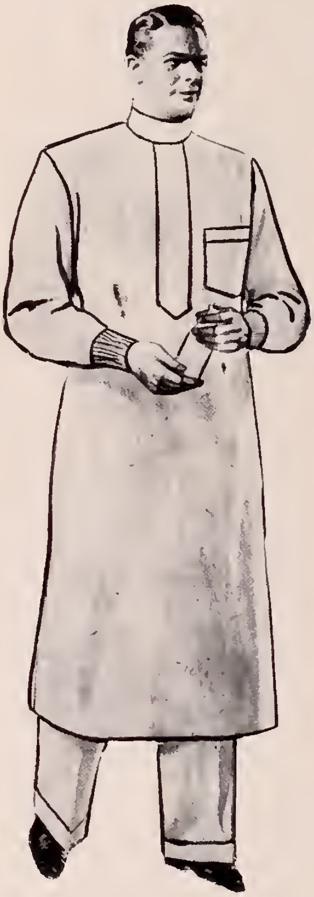

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JUL [illegible] 1941

The Mississippi Doctor

VOL. 19 BOONEVILLE, MISSISSIPPI, JULY, 1941 NO. 2

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Author Unknown

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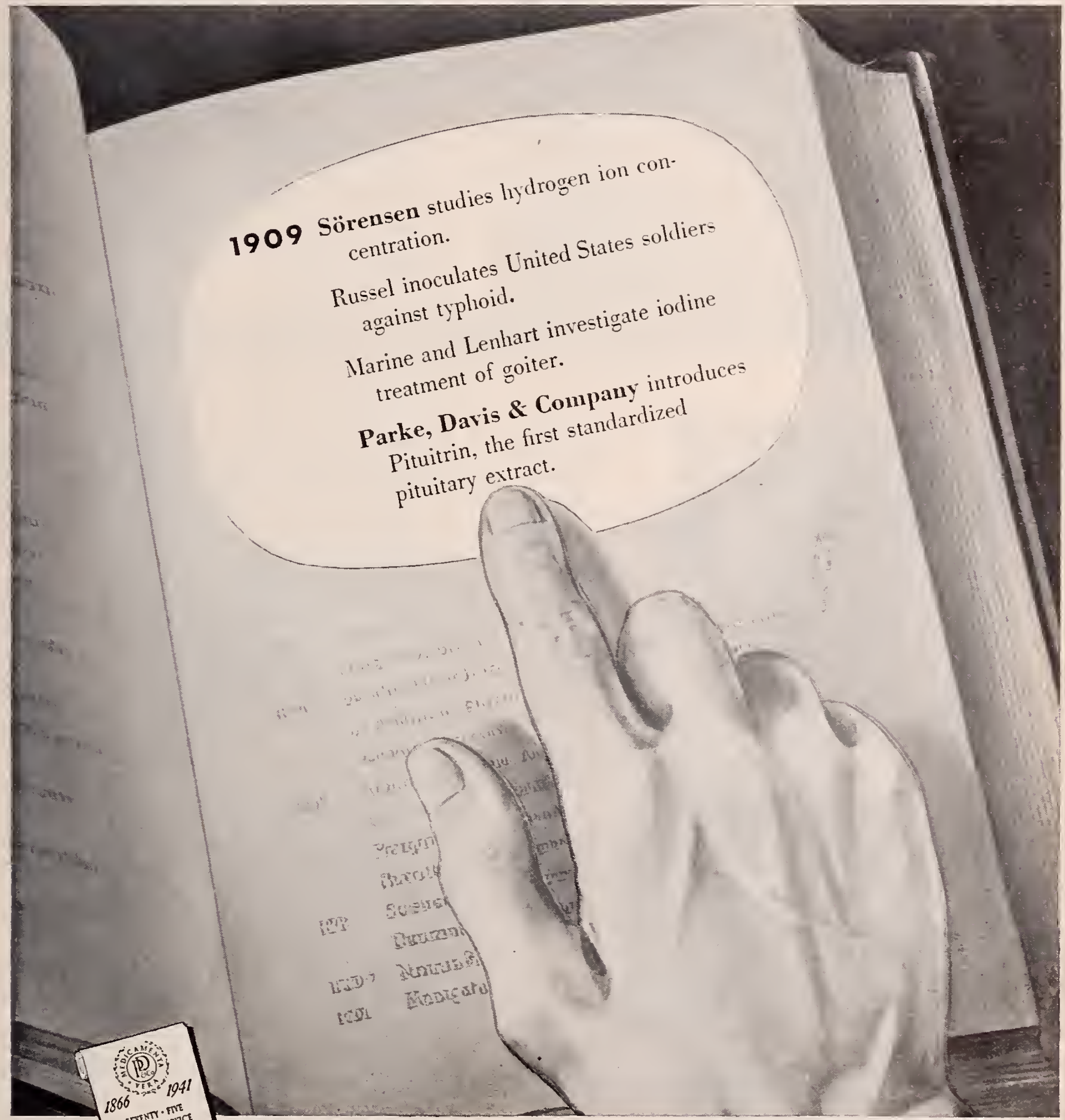

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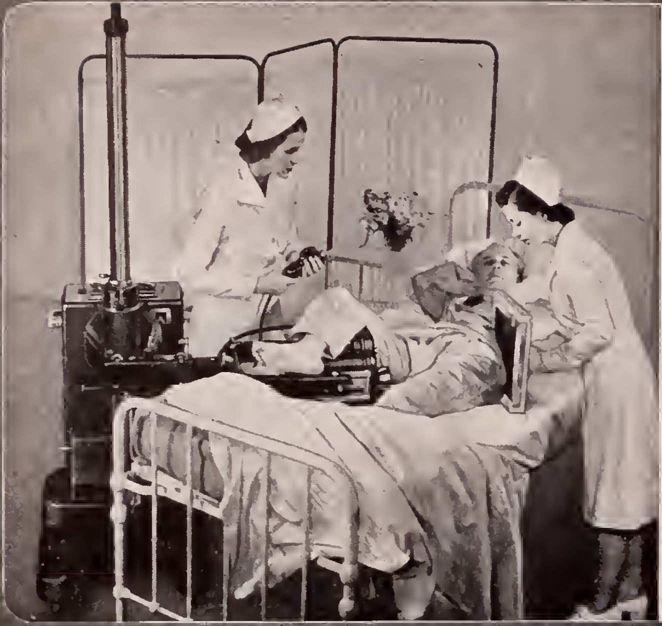

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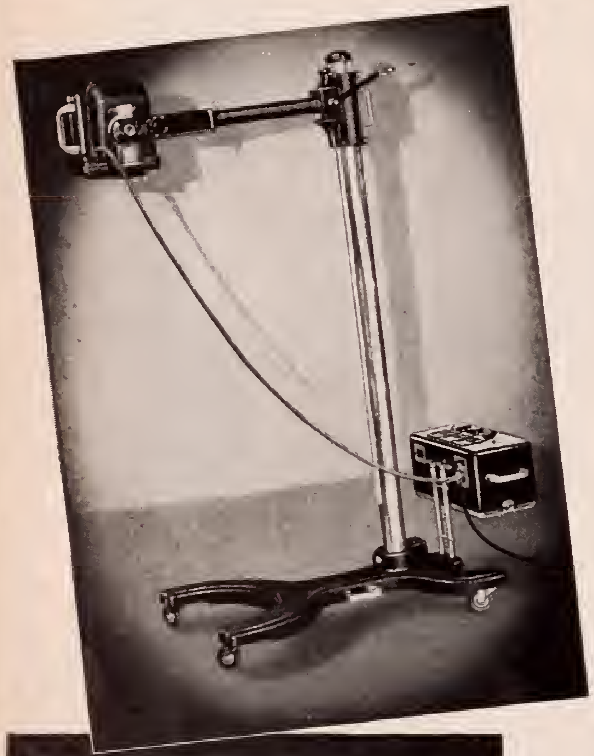

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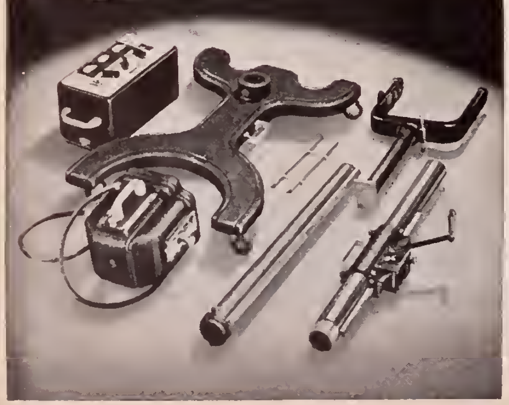

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[1] Cooke, R. A., and Stull, A.: *J. Allergy* 4: 87, 1933.

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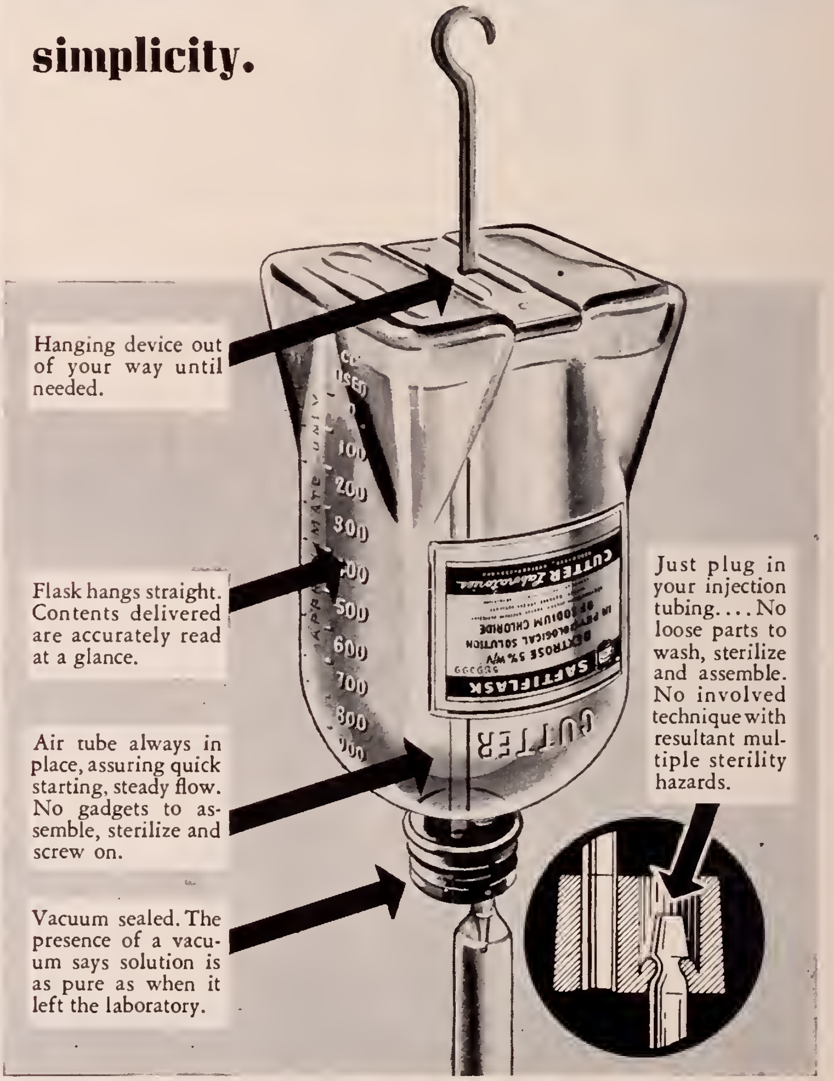
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1915-1941 and the Years Between*

WITH SPECIAL REFERENCE TO THE ANTAGONISM AND PERPETUAL MENACE OF THE OLD IMPERIAL AND THE NEW NAZI GERMANY TO THE PEACE AND SECURITY OF THE UNITED STATES.

RUDOLPH MATAS, M.D.
New Orleans, La.

I

Preamble

It is now twenty-six years since the meeting of the Association held at Hattiesburg in 1915, when I had the honor to deliver the annual oration on the "Soul of the Surgeon," which, thanks to the kind and generous interest in its publication by my good friend, Dr. Anderson, has been kept circulating among the profession as a surgeon's creed delivered on that occasion.

And now, after the lapse of twenty-six years of the most significant and momentous portent to our profession—and I dare say to our country and our civilization—I am again here as your guest, thankfully enjoying the honor of your hospitality, and deeply touched by the cheering cordiality of your greetings and the warmth of your reception. I must confess, however, that, despite my long, deep and affectionate attachment to the Mississippi State Medical Association, I would scarsely be here except for the persuasive eloquence and driving power of your genial president who, persistently rejecting all the pleadings of my octogenarian limitations, has brought to bear on me, not only the most subtle appeals to my vanity, but to my gratitude to Mississippi. For my affection for the people of Mississippi has remained ever green and unforgettable since the *Auld Lang Syne* of my early professional days when so much of my success and prosperity were inseparably interwoven with the trust and confidence of my medical brethren in Mississippi who contributed so largely to my clientele. Not only has Dr. Anderson done this, but he has called to his assistance that wizard from Aberdeen (Dr. Evans), who has just given you a sample of his magic in introducing me. By their combined sorcery they finally broke down my defenses and brought me here as you see, a captive to their will.

"A time expired man." All of this reminds me that (in the period between 1915-1941) I have long since passed beyond the Scriptural age of limitations, not three score and ten, but three score and twenty! On the best authority I now owe no active duties, for I am "a time expired man,"—to use Kipling's military phrase. I have served my time well—or less well; and I should have been mustered out, as Mark Twain puts it, when my ship arrived in port ten years ago, and tied at Pier No. 70. He says, "You have become an honorary member of the Republic, you are emancipated; compulsions are not for you, nor any bugle calls, but lights out."

Nonetheless, and despite the limitation that tradition and Scriptural authority have placed on age, I have rather followed the course adopted by my eminent friend, Dr. W. W. Keen, of Philadelphia, who, on his eighty-fourth birthday, expressed his views as follows: "Long ago I gave up the rather opprobrious phrase of 'old age' and have substituted for it the more seductive locution 'accumulated years.' The latter connotes a certain joy in continued acquisition, a sort of pride in adding one annual sparkling jewel after another to an already precious store."

An octogenarian without ennui. I have been asked frequently of late how I managed to accumulate so many years and yet kept looking so well. To this I have promptly replied, paraphrasing Dr. Keen, "nothing is simpler,—don't stop, just keep right along. Keep the flame of your enthusiasm well fed; mix merry laughter with earnest labor. Always have some yet unfinished but not too urgent job waiting outside of your door, then you will never know ennui. To kill time is murder in the first degree."

---

*Delivered at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 13, 1941.

* For the first or memorial section of this address, see page 80 of this issue.

Quoting now from Wm. Dean Howell's delightful essay on "Eighty Years and After," he first pays his respect to several nonagenarians. He then turns upon those of us who have accumulated ten fewer years, (he actually being one of us) and says: "As to octogenarians, there is no end of them; they swarm; they get in one's way."

In another mood, and speaking at eighty-one, under circumstances not unlike those in which I am now placed, on March 13, 1911,—my honored and beloved teacher, Dr. Stanford E. Chaille, a Mississippian by birth, and a great Louisianian by adoption,—said, "At last I have become a member of a small, unenviable and degenerating class of the population—the octogenarians, who, as many think, ought to have been earlier transferred to another world; either to where the wicked cease from troubling and the weary be at rest (in which I often concur), or to where they would have a hot time in the old place not only tonight but every night and every day to eternity (in which I have not concurred).

Continuing with Dr. Chaille's views, I feel that an anecdote which he tells of an unexpected objection that had been made to the eternal damnation of the wicked old sinners, is worth quoting: "A preacher warned his congregation that God would surely condemn the wicked to hell fire forever, eternally and everlastingly. After the sermon, a politician inquired, 'Mr. Preacher, did you say that the All Merciful Father would damn many of his own children?'—'Yes, Sir.'—'And eternally?'—'Yes, Sir.'—'And everlastingly?'—'Yes, Sir!'—'Well, then, I tell you, Mr. Preacher, the American people will never stand for it.' "

In reverting to Dr. Keen's cheerful attitude, I feel that all reasonable men who, at eighty and over, find themselves still living in the center of the solar system, will agree that it is time they should give someone else a chance to live in the light of the sun by retiring to a shady and cooler spot. Keen, in whose lead I would follow, speaking at eighty-four, under the spotlight of a still colorful scenario, said, "I humbly beg pardon of any of you if I occupy a place in the sun to which you have a better right than I. Ultimately, no doubt, I shall get out of your way, but do not overlook the fact of my maliciously good health, and that some of my collateral forbears have crossed the hundredth milestone of their earthly span. The prospect, therefore, of speedy relief, seems rather discouraging. And to those of you who may be suffering from the wear and tear of a long hike along the trek of life, I would commend the philosophy of the old woman who, when asked by her minister what passage of Scripture gave her the greatest comfort, promptly replied, " 'Grin and bear it' helped me most."

II

THE YEARS BETWEEN 1915-1941

This overlong preamble brings me to the topic of "The Years Between"—which I had planned to submit to your attention before I knew of the opportunity offered by the Howard memorial oration to pay a tribute to a departed friend. I trust that despite the shortened time that remains for the delivery of this message, I may be able at least to outline the most salient features of this historic quarter century as it stretches from the flaming signpost of one war (1915) to that of another (1941) with twenty-six troubled years in between.

I have chosen 1915 as the starting point of this review because the twelfth of May, 1915, marks the date of my Hattiesburg address and the beginning of that anxious and momentous period in our national history when the country, warned of the German menace by the experience of Belgium and France (in 1914), began preparation for the war which culminated in the defeat and overthrow of an imperious and despotic Germany bent upon asserting her dominion over the civilized world.

Lessons of the first World War. The World War of 1914-1918 brought out of its horrors many revelations, discoveries and inventions which have redounded to the benefit of humanity in peace and in war. The lessons gathered from that colossal experience have been carefully preserved and edited by the ablest experts of the warring nations and now constitute conjointly and in their totality the greatest international contribution to the study and progress of military medicine and surgery yet achieved, without parallel in any previous compilations of the same purport and character. The medical history of the first World War, as told by the general army medical staffs of England, France, Germany and the United States remains unique and unsurpassed in its piled up records of human wreckage and of the heroic efforts of the army surgeons to salvage the surviving remnants of the scientific methods of destruction devised by the engineers of modern wars. On the other hand, the foreshadowings and statistical forecastings of the second European conflict that is at this moment raging in Britain, Africa and Asia, indicate that the present war is infinitely more murderous and destructive than its predecessors in 1914-1918,—and in fact more far-reaching in its inhumanity and wanton destructiveness than all the wars of the last century put together.

Progress in the interbellum interlude (1918-1939).—In the twenty-one years that lie between the end of the first and the beginning of the second World War (September, 1939) the knowledge gathered from that experience served as a pedestal for the greater developments that followed in every department of medicine during the postwar period in America.

The developments and advances which medicine has undergone during the intervening period between that first and second world wars may all be grouped under two captions: 1) technological progress, and 2) public relations—including in this the educational, sociologic and economic changes that have transformed the practice of medicine in recent years and made it unrecognizable in its old portraitures. By far the most objective and significant of these advances are those classed in the category of technologic progress, because within the last quarter century medicine, profiting by the world energies set in motion in the twentieth century by the spur of scientific invention and highly mechanized warfare, has enormously enlarged its armamentarium for the clinical investigation of disease with the aid of innumerable inventions—instrumental, mechanical, physical, chemical and biological,—which in 1915 had already surpassed those of any other period in medical history with no slack or let-up in medical productiveness ever since.

New specialties. In this way have arisen a great number of surgical and medical specialties superadded to the old classical specialties which have resulted from the great technical advances inaugurated and made possible by the impetus of the World War. Thus neurosurgery—brain, spinal cord, nerves, peripheral nerves, including sympathetic ganglionectomies and splanchnectomies with adrenalectomies; thoracic surgery—including cardiac, pulmonary, mediastinal, esophageal and diaphragmatic surgery; traumatic, industrial and war surgery—including modern and operative treatment of fractures, war wounds, automobile and airplane injuries, with special reference to war casualties and the treatment of contaminated war wounds by débridement, packing and immobilization in plaster casts (Orr-Trueta method); plastic surgery in all its multiple grafting modalities; chemohemotherapy for wounds and inties; chemohemotherapy for wounds and infections with sulfanilamides and other intravascular germicides for the control of the great streptostaphylopneumococcal and gonorrheal infections; likewise the arsenicals for syphilis on the basis of Ehrlich's *therapia magna sterilisans, etc.* Besides these, *pyrexo-therapy* or artificial fever therapy *endocrinology* including its rising list of glandular and synthetic hormones, estrogens, gonadotropins, etc.; *vitaminology* including its seemingly endless alphabetical projections. These and the hormones have developed and multiplied so prodigiously and found so many diversified applications that merely to keep in touch with their nomenclature and limitless indications (fantastically described by the talented manufacturers who are now swarming over this new field rich for exploitation), requires all the concentration of study and attention demanded by a specialty.

These and a thousand other profoundly revolutionary technics and methods that have come in vogue at the present time to further the diagnosis, prevention and treatment of disease, can only be referred to here in the most general terms as any attempt to enumerate them in detail would be not only a superfluous but impossible task, since it would take a large encyclopedic volume typed in small print to enumerate or classify them. For, in an effort to itemnize all the notable contributions to medical progress that are catalogued in the Cumulative Index Medicus of the A. M. A. and the Index Catalogue of the United States Army Library, we find that over 850 items have been recorded as pertinent to this title in the course of the last twenty-five years (1915-1940).*

The miracle of sanitary reform in Louisiana

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*See also, Whalen, Chas. J., Ill. Med'l. Jnl., 1940, 77; 612.

Fishbein, M., A Century of Medical Progress. Ill. Med'l. Jnl. 77; 1940; 604-612.

and Mississippi. But far above these specialties in their relation to the public welfare is that of the professional sanitarians—the city, county, state and federal health officers whose utility as guardians of the public health has found its highest expression in recent years in our own states of Louisiana and Mississippi—for nearly two centuries reputed the hotbed of imported pestilence and native endemic infections—which now, thanks to medical science and modern sanitation, are prosperous and free from the taint of insalubrity.

It is indeed only since the South has been secure from the perils of foreign pestilence, yellow fever, cholera, bubonic pest, and the endemic plagues of malaria, typhoid, smallpox, diphtheria, hookworm and pellagra, that we are called to witness a transformation in the vital, economic and intellectual life of the people here (in this marvelous Riviera of the Mississippi Coast) and throughout the South, that would scarcely have been credible, even as a miracle, half a century ago!

When we consider what the delivery of New Orleans from yellow fever (1905) has alone meant to the prosperity of our city, to Louisiana and to you, our brethren of Mississippi, we must agree that the children in the schools should learn that the peaceful and bloodless victories of medical science are fraught with infinitely more significance to the welfare and happiness of the race than all the bloody battles that bear testimony of "man's inhumanity to man."

Changes in the Public Relations of the Medical Profession: Educational, Social and Economical. Medicine as an integral part of the social body promptly felt the repercussions of the changed conditions brought about by the inventive genius of the twentieth century—the telephone, radio, television, automobile, areoplane, and paved roads—to which it is even now struggling to adjust itself. The fact that alert doctors cover more ground and do ten times more work than the same men of the horse and buggy age, caused an overplus of unemployed and dependent doctors who were already suffering in the crowded cities, from the increasing free charities in hospitals, clinics and dispensaries.

This plethora of doctors caused by excess of supply over demand has at this moment ceased to be a complaint since drafting of 20,000 doctors for the Officers Medical Reserve Corps to meet the requirements of the new army, has provided automatically the needed remedy; in fact, it is possible that the civilian population may ultimately suffer in the rural districts from medical depopulation or anemia of doctors, if the entire reserve corps is put into active service.

The same might be said of the great question of the *increasing cost of medical care* and the relation of hospitalization, nursing and professional compensation to meet the needs of the low salaried and under privileged classes, a problem involving studies and discussions which already fill libraries with a great mass of interesting and valuable, but inconclusive data.

Group practice, health insurance, or socialized medicine? The great increase of money in circulation with the return to employment of a vast number of workers engaged in the operations of national defense would seem to relieve this question of immediate urgency. Again, the gradual decline of the general practitioner and his disintegration under the pressure of increasing demands of education and of numerous and increasing specialties, has led many to seek a refuge in "group practice" where, as a member of a many faceted organization, the young graduate is able to cultivate his individual or specialized talents, with benefit to himself, his associates and the public. From "group practice" to collective bargaining for medical service is but another step to voluntary health insurance including hospitalization and doctors' fees under direction and control of the medical profession, or, instead, as has been proposed, free medical service provided and controlled by the state—namely, socialized medicine, as compulsatory health insurance to be paid by taxation, etc. This and still other problems have up to now tremendously agitated the best minds of the profession and divided it into divergent factions, culminating in the recent suit of the Government versus the American Medical Association based on anti-trust laws, ending unfavorably for the organization. Fortunately for the profession, at large, there is no need of worrying about the solution of this question since it may be indefinitely postponed, at least, as long as the energies and resources of the Government and of the profession are engaged and pledged to the supreme cause of national defense.

III

Nazi aggression a menace to American independence. In reviewing the medical chronology of the last quarter century, I have summarized the most notable lessons of the first World War and stressed the amazing effect that the machine age and industrial revolution of the second and third decades of the twentieth century have had upon the organization, the practice, the education, the sociology and the economics of the medical profession of this country.

In the midst of the most earnest efforts to adjust ourselves to the sociologic and economic conditions of the new era we have been brought face to face with the sinister specter of War, bearing with it the *Swastika* as the symbol of ruthless Nazi aggressiveness and of the deadly menace to our vital interests as enlightened American citizens.

While the heated discussions and conflicting debates that have been going on in Congress and at public meetings, by radio and by the press, have made the public aware of the gravity of the situation, they have made us feel that its dangers and significance for our future as a free and independent democracy are now only beginning to be realized by the mass of the people. I must therefore revert to my recollections of the meeting of 1915, at Hattiesburg, where I had been invited as your guest to deliver the annual oration, so that I may turn back a few pages of history the better to appreciate the extraordinary analogy, in fact identity, of the unprepared state of the public mind in facing the issues of the first World War (1917-1918) with the same unpreparedness and lack of realization with which we have been facing the seemingly unavoidable conflict that is now glaring at us around the corner.

History of Germanic lust for conquest repeats itself a third time. A few touches of history will suffice to show that Hitler, the Fuehrer of 1939, is but a second enlarged edition of the late William the Second, the Kaiser of 1914, just as he in turn was a small replica of his great grandsire, Frederick the Great, all megalomaniacs and hereditary but atavistic types of the national Germanic lust for war and conquest. What effect the Nazi domination of Europe has had on the intellectual, moral, physical and economic status of the conquered people and what America may expect from a triumphant Nazi régime, may compel us to pause, think and act. For though we as doctors are by profession pacifists, we are also realists and humanitarians and citizens.

* * * *

War clouds hovered over Hattiesburg meeting in 1915. When we met in Hattiesburg on May 11 and 12, 1915, we were tremendously impressed by the news received five days before the opening session that the great ocean liner, Lusitania, had been sunk without warning by a German submarine off the coast of Ireland, with the loss of 1198 persons drowned, including women and children, of whom 114 were American citizens. What intensified the feeling against Germany was the fact that this monstrous crime was celebrated in Germany as a great victory with commemorative medals struck in honor of the "heroic" captain and his abominable craft.

The World War had already kept Europe ablaze with the fires that had reduced to ashes churches, monuments, universities, hospitals and libraries in Belgium and France for a year following the invasion of Belgium in August, 1914. The atrocities committed by the ruthless invaders, coupled with the execution of Edith Cavell, and the drowning of Mme. Depage, wife of the Surgeon General of Belgium, returning home on the Lusitania with American funds for the relief of Belgian wounded, had aroused the sympathies of the American people, already deeply engaged and concerned in the heroic sacrifices that their Canadian neighbors and other dominion forces were giving unstintingly in their devotion to the mother country.

President Wilson, working sleeplessly for peace, with deepest sincerity and conviction, appealed to the belligerents to cease hostilities, only to be rejected except under terms dictated by the Kaiser, precisely as now no peace proposals would be accepted by the Nazi régime except on terms dictated by the Fuehrer;—or, if agreed upon, they would serve merely as a make-shift designed to instill a sense of false security on the part of the victims. But it was the menace of unrestricted submarine warfare and the actual sinking of American freight ships, the use of poison gas, the wholesale destruction of Red Cross supplies for the sick and wounded of the Allied armies, the persistent destruction of vital war factories and industries by German saboteurs, and deep concern in the fate of the numerous American volunteers who served with the British and French forces, especially in the ambulance service, that steadily intensified the universal call for American intervention.

Medical preparedness. In 1916, it was evident despite the pacifist attitude of the president and of the majority of his cabinet, that the country was rapidly drifting into war. The committee of American physicians, organized for preparedness (April 14, 1916) followed by the creation of a commission of national defense (in October, 1916), and of the national advisory commission on medical preparedness (June 30, 1917) had been preceded by the organization of base hospital units under the auspices of the Red Cross. In the meantime, the passage of the Army bill by Congress (August 29, 1916) creating an army of over 3,000,000 men, with an accompaniment of 25,000 medical men of the Officers' Reserve Corps, had fairly advanced the military organization of the country.

The constant abuse by the Germans of President Wilson's good faith in holding to the terms of our neutrality bill, and especially Germany's brutal manifesto which announced the inauguration of unrestricted submarine warfare, January 20, 1917, followed by the sinking of several American freighters and United States naval craft, precipitated the immediate recall of American Ambassador Gerard from Germany, and the dismissal of Count Bernsdoff from Washington, as a prelude to the declaration of war against Germany (on April 4-5, 1917) by President Wilson, seconded by an overwhelming vote of Congress and the cheering approval of the people.

The Isolationists.—There were then as now groups of men in Congress who, long before the suggestion or the prospect of war, continually and systematically opposed all legislation and appropriations for defense that would give material assistance to the British and the countries fighting for democracy—insisting that whatever we might do to increase our forces and our armament would lead us into war that would not only fail in its purpose, but would "lead our boys to foreign graves," etc. The prototypes of the Wheelers, Nyes, Tobeys, Fishes, Clarks, Tinkhams, Vandenbergs, Lindberghs, LaFollettes, and other isolationists, Anglophobes, Germanophiles, defeatists, "conscientious objectors," fifth columnists, "Quisslings," *et id omne* were all duplicated and in replica in the congressional debates that preceded our entrance into the World War from 1915-1917.

Some were like the late senior senator, La-Follette, chronic and constant obstructionist, who often utilized his parliamentary talents to hold the senate clock in check for hours and days in filibustering speeches in opposition to all measures that might be helpful to the British and Allies. And others, like W. J. Bryan, Henry Ford, Stone, of Missouri, Kitchin, of North Carolina, and still others who, playing the role of patriots, would have been willing seemingly, to contemplate the ignominious sacrifice of our entire merchant marine to the prowling and insolent submarines rather than risk the hazards of war to destroy them.

And so it was also, as far back as the War of 1812 with Britain, that notorious obstructionists in Congress would gladly have signed a peace which would have virtually restored to the British crown a great part of the land that the Revolutionary Fathers had wrested from it. Yes, it was rumored that, rather than face war with Britain, they would actually have surrendered Louisiana and the West as an added sop to the invaders at Washington! And so the glory and security of the newly acquired territory of Louisiana given by Jackson's victory at New Orleans would have been lost if the isolationists had had their way. Again, a century later, the stupendous triumph of the American expeditionary forces in France, over one million strong were transported safely across seas swarming with submarines and floating mines—the most fabulous Argonautic of all time! Again, an exsanguinated and exhausted Europe was rescued by the transfusion of young, strong American red blood, and the braggart taunt of the Prussian Junker, "What, the Americans! a nation of shopkeepers, an undisciplined mob—how can they ever fight an army of real soldiers?" was hurled back at them, leaving them crushed and flattened for all time. All this would have been lost to history if the isolationists had had their way!

And yet there are, no doubt, a number of well meaning, honest but credulous isolationists who, in good faith, believe it possible for a great nation, in this twentieth century, to live within itself like a walled town, shut away from the outer world! They forget that the nation that tries to escape from the reality outside of itself finds that the reality comes and pounds at its gates. And this is the fact that we are now actually facing; yes, even now, when current events in Europe are almost daily demonstrating the fallacy of the isolationists' creed—too prejudiced to hear, too obstinate to see!

Why democracy is worth fighting for. For democracy with its institutions, defective as they are, has, "of all forms of government, come closest so far, to offering any material number of the earth's inhabitants the opportunity to achieve and perhaps maintain the highest degree of liberty with security, but we are learning again that it is only at the price of eternal vigilance. We may desire the perpetuation of what we consider certain fundamental rights of man, but they are recognized as rights only in a democracy. We have to be willing to go forth in defense of these rights. *We have to risk in order to hold; we must sometimes lose in order to gain."*

While the slogan was adopted early in the World War that America was in the war "to save democracy and to end all wars," it is evident that the war of 1917 between the United States and Germany was waged not merely to save the allied democracies imperiled in Europe, but essentially to preserve our own independence by defending them. From this viewpoint alone, the conclusion arises that the tremendous price we had to pay in life and treasure to win the war, turned out to be in the end, a profitable investment. For a German victory, a Pax Germanica, as was planned by the Kaiser and the "Potsdam clique" and by the German "intellectuals," with the famous Haeckel,—the naturalist-philosopher, (the least suspected of rank intolerance)—at their head,—would have been, at best, a peace of subjection, signed at Buckingham Palace, thus converting Britain into a vassal state, with all her fleet, her industries and commerce transferred into German hands, leaving her completely shorn of all power and independent action,—her old insular security being completely nullified by an aerial bridge that would have inseparably bound her to the continent. In so far as France—she was to be removed from all possible antagonism or rivalry by her definite absorption into the German Reich, leaving a bare strip as a relic, under the shadow of the Pyrenees. She, with all her African possessions and other dependencies were to be ultimately transferred to the Kaiser's domain.

Yes, the peace terms imposed on Germany at Versailles were as a caress by the side of the grinding and pulpified extinction planned for a defeated France and Britain by the Prussian Junkers.

The Kaiser.—Evidently any peace obtained by negotiation or arbitration signed by the Kaiser would have merely meant a truce, for the reason, then as now with Hitler, it would simply have been a mere postponement of further aggression and subjection. For the vision of a Germanic world empire to include North America, and ultimately the whole western hemisphere, was a vista which for years delighted the Kaiser's fancy with its glamor. If we may judge by the deeply calculated plans for world conquest that Gen. Frederick von Bernhardi so clearly described in a book on "Germany and the next war,"[*] published in 1911 with no doubt the silent approval of the Kaiser, then Germany's militaristic policies and performances in the World War were completely forecast.

Germany's militaristic creed. Von Bernhardi was a disciple of Heinrich von Treitschke,[**] who died in 1896. He glorified war as few historians have ever done. He, as the arch priest of militarism, is largely responsible with von Bernhardi, Tannenberg and, indirectly, Nietzsche, for the swollen notions of the Germans as a race of supermen, which Hitler faithfully pursues and still further inflates with the notion of Aryan superiority, including the natural right to enslave the inferior (non Aryan) race.

In this book and in a later publication Vo HEUTIGEN KRIEGE, von Bernhardi declared that this supremacy is a "biological necessity." "Might," he asserted, "has at once the supreme right, and the dispute as to what is right is decided by the arbitrament of war." And again: "The appropriate and conscious employment of war as a political means has always led to happy results." Nations not only have a right to make war, but it is their duty to do so, if thereby they can increase their power. And from general principles such as these, he proceeds to consider when, how, and with whom Germany should make war in order to advance her position in the world, "as the greatest civilized people known to history."[***]

The words of Goethe reflect the opinion that prevailed in Germany—long befor the World War:

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[*] Authorized edition translated by A. H. Powles. New York: Longmans, Green & Company, 1914.

[**] J. M. McCabe. "Treitschke and the Great War." New York: Stokes, 1914; republished, 1915.

[***] Ridpath: History of the World. Revised Edition by H. F. Klein, Ridpath Historical Society, Cincinnati. 1936, VIII, 3394.

> "Dream ye of peaceful way?
> Dream on, who dream it may,
> War still is empire's word!
> Peace? By the Victor's sword!"[*]

The Pan-German League, first founded in 1886, expressed itself in a number of manifestos of which the following is a sample of a prophesy which Hitler, in 1939, made a reality:

In the course of time, the Pan-Germans really came to favor seizing everything upon which they could lay their hands.

They laid great emphasis upon military and naval preparedness, and, of course, bitterly opposed all plans for disarmament or arbitration.

> "Let us not forget the civilizing task which the decrees of Providence have assigned us," urged one Pan-German. "Just as Prussia was destined to be the nucleus of Germany, so the regenerated Germany shall be the nucleus of a future empire of the West. And in order that no one shall be left in doubt, we proclaim from henceforth that our continental nation has a right to the sea, not only to the North Sea, but the Mediterranean and the Atlantic. *Hence we intend to absorb one after another all the provinces which are neighbors of Prussia. We shall successively annex Denmark, Holland, Belgium, Northern Switzerland, then Trieste and Venice, finally Northern France from the Sambre to the Loire. This program we fearlessly pronounce. It is not the work of a mad man. The empire we intend to found will be no Utopia. We have already to hand the means of founding it and no coalition in the world can stop us."*[**]

The Pan-German Schemes. — The Pan-German schemes of conquest were as broad as the globe. As early as 1901, an officer named Von Edelsheim, a lieutenant in the service of the German General Staff, wrote a disquisition upon the best method of conquering the United States. Two years later, another writer declared that the "future language" spoken in America must be German. The Monroe Doctrine was regarded as "an impertinence." Brazil, which contained many Germans, must be united with the Empire. Another enthusiast thought it "truly a miracle that the German people did not long ago resolve on seizing" southern Brazil and Uruguay. Tannenburg favored having Germany take "under her protection the Republics of Argentina, Chile, Uruguay, and Paraguay, the southern third of Bolivia, as much as belonged to the basin of the Rio de La Plata, and the Southern part of Brazil, where Germans predominated."

> There can be no doubt that had it not been for the Monroe Doctrine, Germany would long ago have seized some or all of this rich region. But German Government had discovered that the Monroe Doctrine was a dangerous reality. The men who taught the War Lords this lesson were John Hay and Theodore Roosevelt.[*]

The Views of the Kaiser Reflected by His Court.—"Our unrestricted submarine warfare has just started," he said, "and we're going to bring England to her knees within three months. That's positive. Some think this will bring America into the war, but we are sure it won't. We'll crush England and compel her to deliver her fleet to us. America would not then be so foolish as to go into the war and run the great risk of being disastrously defeated simply to fight the battle for France and Russia, because with England's fleet and our own we shall be able to attack New York!" (Prince of Pless, 1918).[**]

"On one occasion when discussing the Carnegie Peace efforts by the establishment of an international court at the Hague, the Kaiser disclosed very positively where he stood on the proposition."

"Look at the history of the nations of the world," he declared. "The only nations which have progressed and become great have been warring nations. Those which have not been ambitious and gone to war have amounted to nothing!"

His life's ambition was summed up in the words: "From childhood I have been influenced by five men—Alexander the Great, Julius Caesar, Theodoric II, Frederick the Great and Napoleon.

"Each of these men dreamed a dream of a world empire. They failed. I have dreamed a dream of a German world, and my mailed fist shall succeed."[***]

Ambassador Gerard[****] gives an account of a lively interview with Herr Zimmermann, during a conference in protest of unrestricted submarine warfare (1917).

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[*] Ridpath, op. cit., VIII, 3402.

[**] Ridpath, op. cit., VIII, 3396.

[*] Ridpath, op. cit., VIII, 3398.

[**] Arthur N. Davis: The Kaiser as I Knew Him. New York: Harper, 1918, p. 142.

[***] Davis, op. cit., pp. 130, 136.

[****] James M. Gerard: My Four Years in Germany. New York: Doran, 1917.

"Zimmermann said to me, 'the United States does not dare to do anything against Germany because we have 500,000 German reservists in America who will rise in arms against your government if your government should dare take any action against Germany.'

"In reply I told him that we had 501,000 lamp posts in America and that was where the German reservists would find themselves if they tried any uprising."

> This story is interesting in forecasting what this Government could expect from the Armies of Nazi Bundists disguised as American citizens who at the proper moment would be quick to show the true color of their nationality.

* * * *

A *pax Germanica,* a peace based on the submission of a conquered world, with Berlin as its central axis, the sun, around which the conquered nations revolved in their orbits, as a well regulated planetary system, was undoubtedly the Kaiser's conception of a triumphant Germany. It is now interesting to see that Hitler, with the same type of imagination, has revived a new and unabridged edition of the Kaiser's dream which is being held before the German people in all the flush and pride of their recent victories—an astronomical reality, forgetting that the solar system of German imperialism built up by the Kaiser's imagination thirty years ago, proved to be only a mirage.

The Effect of the World War No. 2 on Civilization and Scientific Progress in the Nazi Occupied Countries.—Even before the Nazi régime had been definitely established in Germany, the anti-Semitic, political and religious crusades had begun to drain Germany of many of its most noted intellectuals. After the Nazi Juggernaut had rolled over the neighboring countries (Holland, Belgium, France, Poland, etc.), the anti-Semitic and political persecutions were extended to them and the exodus to America and other countries began to deplete the universities and other institutions of learning of their best talent. *It is also evident that as the list of refugee professors kept steadily increasing in the United States, that the center of scientific learning was shifting rapidly to the United States and that it was the manifest destiny of this country to become the repository or custodian of scientific research in general and medical learning in particular.* For this reason the quotations that are here appended from the annual report of the president of the Rockefeller Institute, Mr. Raymond Fosdick, for January 1, 1941, are deeply interesting as a forecast of the fate of science in Britain or in America, if these ever fell under the influence of the Nazi dictatorship.

Lights of learning fading in Nazified Europe. "In the shadows that are deepening over Europe, the lights of learning are fading one by one. The conception of knowledge as an international responsibility has vanished. The free flow of ideas across boundaried lines between laboratories and universities has dried up. Everywhere the exigencies of the war have erased the possibility of intellectual and cultural life as that term was understood a few years ago."

> *Continental universities closed or their teaching Nazi-controlled.* "On the continent, as distinguished from Great Britain, the situation during the last year has rapidly deteriorated. January, 1941, finds a large number of universities and institutes closed, and many others working under conditions scarcely tolerable. As German forces have moved into one country after another, a definite pattern has been followed in relation to the universities and other schools. Allowed at first to continue with their work, their teaching and student activities were closely supervised by the German authorities. The supervision involved an attempt to enforce a 'cultural program' similar to that already enforced by the Nazis on German institutions. Where this attempt was resisted, as it frequently was, the measures of repression adopted by the occupying authorities, included the closing of the institutions, sending faculties to concentration camps, and even breaking up student demonstrations with machine guns and tanks.
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> "In two Czecho-Slovakian universities in the winter of 1939-1940, hundreds of students were imprisoned and many were shot. Finally, the universities were closed and most of the student body was deported for forced labor in Germany. In Holland, in 1940, as in Poland, in 1939, there were many arrests and deportations of students and professors. Similarly, in the Norwegian universities, the German attempts to force the Nazi cultural pattern have been marked by frequent ar-

rest and disappearance of professors and students alike.

"Belgium's four universities were all permitted to reopen in October, but severe restrictions were imposed on the University of Brussels and the Catholic University at Louvain, where the library was completely and apparently deliberately destroyed by the Germans. The number of students has been greatly reduced in Belgian institutions and the Germans are exercising close control over the teaching. In Paris, following the Armistice Day demonstration, in which a number of students were machine gunned, the University was closed for a period, and the rector dismissed."

"The condition of university life and standards on the continent is now (January, 1941) short of appalling. Due to flight, imprisonment or disappearance, the number of professors in institutions has been reduced by at least 50 per cent . . "

"Over all the continental universities hangs the pall of uncertainty and fear. The contact with contemporary life has been abruptly broken. Even where fundamental research is being continued, publication has largely been abandoned or postponed. In the social sciences, such research as is being carried on is confined to innocuous projects which have no relevance to the present scene. Even neutral countries are under pressure to permit a totalitarian interpretation in the teaching of such subjects as economics, political science and sociology, as scholars — to quote a recent guarded letter—'exercise a certain tact and circumspection in the treatment of the most up-to-date problems.' "

Scholarship withers without freedom. "In such surroundings, scholarship withers and only through a heroic struggle keeps itself alive. When the German minister of justice tells the Association of University Professors that the old ideal of objectivity is nonsense and that 'today the German university professor must ask himself one question: 'Does my scientific work serve the welfare of national socialism?' he is voicing a doctrine which, if broadly applied, spells the end of Western scientific thought. When relativity becomes 'an example of characteristic perverse Jewish thinking.' and genetics is a battleground for the 'Aryan theory' then the end of the day has come in which Claude Bernard could say: 'I give small thought to where the truth will lead me, provided that I find it.' "

"It is only in an atmosphere of freedom that the lamp of science and learning can be kept alight. In all the history of the race, knowledge has never flowered in a subject people. It is only free men who dare to think, and it is only through free thought that the soul of a people can be kept alive."*

EPILOGUE

In the preceeding pages, I have quoted freely from the most authoritative sources to prove that the second World War (1939-?) is only an enormously magnified replica of the first based on the same alleged and underlying causes—rivalry, revenge, Versailles—but chiefly a deep-rooted ancestral lust for war and conquest; an indoctrinated and immensely inflated notion of race superiority, spurred on by twenty-one years of unlimited and nurtured German hatred of France and Britain, traditional obstacles in the way of Nazi-German expansion. A war, not merely of domination and subjection but of extinction and extermination of the defeated belligerent, the principles and aims of which have guided the Fuehrer and his generals, is precisely the same as that conceived by Bernhardi and the German militarists of 1914-18 for world conquest, including America, which, long before the first World War, had been thoroughly surveyed by the strategists of the Kaiser and of the Pan-German League. In the second war organized Nazi-Bundists, pretending American citizenship, even now report their activities to Berlin whence issue instructions for Nazi coöperation in America. This fact is still apparent in clandestine propaganda, fifth columnists, saboteurs, anti-British meetings and opposition to all forms of defense legislation or war preparations, including strikes, fires, etc.

Thus far, the success of the Nazis and their allies in the present campaign is based on intense, sleepless military preparation with innumerable new weapons of extraordinary novelty and terroristic ingenuity in aviation, artillery, land and submarine forces. Besides, it requires the spectacle of a whole nation transformed into vast military camp with all males of military age drafted, equipped, disciplined and trained from childhood with fanatic zeal to serve one cause—"Deutschland uber alles"—

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*President Fosdick. Review of the Rockefeller Foundation for 1940, pp. 10-13.

and know only one duty—to plant the *Swastika* over the earth and to serve "Der Fuehrer Hitler, the man-God, predestined to make Germany the master of the world.

The defeat and downfall of the European democracies are due to the international conflicts of their divided, unstable, chaotic and partisan governments; their visionless statesmanship and military unpreparedness; their sleepy, deluded patriotism, their blind trust in appeasement, isolation and neutrality; and childish faith in negotiated pacts and treaties when dealing with crafty, rapacious and murderous foes.

There are pacifists, isolationists and believers in neutrality and appeasement here in America, who prate on our economic independence and who say "We can get along with Hitler, we can trade with him." Listen to Mr. Mark Ethridge,* the latest, most lucid and ablest American student of the economic consequences of a Hitler victory, who warns of the futility of any such optimistic expectations.

"Anybody who thinks we can trade with a Hitlerized continent except on Hitler's terms and by his methods is either a plain fool or an ignoramus. Let us examine his character for just a moment on the assumption that we must do business with him if he wins. I quote his own words: 'There is no such thing as truth, either in the moral or in the scientific sense . . . Providence has ordained that I should be the greatest liberator of humanity. I am freeing men from the dirty and degrading self-mortification of a chimera called conscience and morality, and from the demands of a freedom and personal independence which a very few can bear . . . I make use of all means that seem to me of service, without the slightest concern for the proprieties or for courts of honor. And if people come blubbering to me, complaining that I am breaking my word, that I am paying no regard to treaties, that I am making a practice of trickery and deception and misrepresentation, I reply: 'Well, what of it? You are free to do the same. Nobody is preventing you.' "

Here we have a picture of the man and his character; we have the story written by Mosse and Thyssen and a hundred of others of what happened to the trusting business souls who embraced the viper of Nazism; we have the pattern of what he has done to countries which he has already over-ridden and the blueprints of what he proposes to do when he becomes master of the world. We have in his own words his contempt and his plans for America.*

Hitler victory means economic war for U. S. A. In his further analysis of the economic consequences of a Hitler victory Mr. Ethridge says:

> "If England goes down we face against terrible odds the greatest economic war the world has ever had, a conflict perhaps more disastrous than all the wars and depressions rolled into one . . . In possession of Britain, Hitler would be ready for the next step, which is economic warfare upon us, with Latin America as the first battleground.
>
> "If Hitler wins we face not only a hostile Germany, we face a hostile or dominated world. Hitler will be in control of all Europe and with Mussolini, if he survives, in control of all Africa. Japan will seize what she wants in the Pacific west of Hawaii, including Malaya and the Dutch East Indies, and we will not dare stop her because the Axis powers will have a navy two and a half times the size of ours. What she does not seize, Japan will dominate economically. Russia will be the third great area. (Hitler shows he intends eventually to liquidate Russia.) The United States and Canada and the immediate Caribbean countries will be the fourth. The line-up would be this way: Europe west of Russia would have three hundred seventy million persons under Hitler with other millions in Africa. Russia would have two hundred millions; Japan with China more than four hundred millions plus another two hundred millions in India, Malaya, Borneo, etc. The United States, Canada, and the Caribbean would be one hundred seventy millions. If there are two billion people in the world, as estimated, we would face many more than

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*Read his masterly and irrefutable argument delivered in Louisville, January 21, 1941, International Conciliation No. 370, May, 1941. It is a pity I can only quote some of his conclusions.

*This is what he thinks of America. "The present government of the United States is in the last death rattle of a corrupt and outworn system which is a blot on this people.

"I guarantee that at the right moment a new America will exist as our strongest supporter when we are ready to take the stride into overseas space. We have the means to awake this nation in good time. There will be no New Wilson arising to stir up America against us."

a billion of them hostile or dominated commercially and politically. Hitler would have then only to conquer us to dominate the world.

"We are accustomed to thinking of ourselves as a great nation. We are, as compared with any other one nation, but if Hitler wins, the totalitarian powers will control 70 per cent of the world's shipping, seven times as many shipyards as we, 10 per cent more steel production than we—and it is our great boast that we are the major steel-producing nation of the world. He can manufacture and sell goods much cheaper than we can. Any business man recognizes that danger.

"I think it is clear that if Hitler wins (1) we shall inevitably have an economic war for our very life; (2) we shall be at a disastrous disadvantage because he will have all of the experience of eight years of controlled economy and of a propaganda which has not been matched in the history of the world, and (3) because he will hold most of the cards of the raw materials which are vital to our very life.

"The only sure hope of our survival as a democratic nation and the only hope of a return to a pretense of a relatively free flow of commerce—and, therefore, relatively stable internal situations—is to overthrow Hitler and his dreams of world victory.

"If Britain wins we would have an atmosphere free from power-lust and all the bad things Hitler represents, free of the desire to dominate other men because they trade with them. We will have an atmosphere cleared of all these things, and one in which we will have a chance to work our destiny out. We can fall as a nation if Hitler wins. We can live in relative peace and security if Britain wins.

*"We must fight Hitler, whether we like it or not, no matter what the odds."**

CONCLUSIONS

Having lived through the twenty-six years over which is stretched the span that connects the first with the second World War, in which Germany was the chief offender; and, having shared the anxieties of the truly patriotic citizens of these United States including this Society during the critical period that preceded the American entry into the first World War (1915-1917); and, again, on this occasion when we are confronted with the close proximity of a second war, with the same enemy, I have availed myself of the opportunity offered by this propitious occasion to refresh my recollections of the past to compare them with the experience of the present in order that you may judge of the reasons that have led to my conclusions as expressed in the following resolutions.*

(1) That the international situation existing between the United States and Germany at this moment, when conflict between Nazi Germany and the United States seems inevitable, is precisely the same menacing situation that existed in the pre-war period between the Imperial Germany of the Kaiser and the United States;

(2) That the reasons for the indictment of Germany and that justified our declaration of war in 1917 are even greater and more urgent now than they were then;

(3) That Germany's war with Britain is not only a war of conflict and domination but one of extermination, aimed at total destruction of the race with all its possessions, with the only alternative of surrender with enslavement and final absorption in the German Reich;

(4) That the Nazi conquest of Britain would transfer the command of the Atlantic to an avowed naval and hereditary enemy of the United States and of our Canadian brethren, an enemy whose long aim and ambition has been (even long before his defeat by us in 1918) to undermine our vast and unconquerable potential and actual strength by insidious methods of propaganda, espionage, sabotage and disloyalty of our German-American population;

(5) That the preservation of Britain from Nazi domination is a matter of supreme concern to the United States because the British are our most natural and logical allies, who, with Britain, constitute our chief bulwark of defense in the Atlantic, whereas a Nazi

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*As an antidote to defeatists and isolationists, discouraging speeches and arguments which disparage the fighting ability of the United States in this emergency read: "America's Strength," by Alsop & Kintner—"The News Behind the News"—Washington. New Orleans, *Item-Tribune*, June 14, 1941.

*Despite the prevailing fog that makes it difficult to distinguish between saint and sinner in the Nazi church, I wish it understood that I know that not all Germans are Nazis and that even among the latter there are many who are honest in their convictions. Unfortunately, in dealing with the mass, it is impossible to make distinctions.

Britain would be the enemy's first, foremost and most salient spearpoint of attack;

(6) That as far as the moral issues are concerned the difference is quite clear: this is a fight between right and wrong, between civilization, law and order on one side, and savagery, unheard of cruelty and total disregard of human rights on the other;

(7) That the situation is critically dangerous for Britain now, and for us, later, if Britain falls;

(8) That we are now facing an emergency; that a maximum effort to prevent the catastrophe of sending Britain "too late, too little" and that a strong stand should be taken quickly before the United States is left alone facing a totalitarian world armed and determined to exterminate our Democracy;

(9) That the time has come when the President should declare a "State of Emergency," which would enable him to establish government control of all defense efforts on a wartime basis, without declaring war;*

(10) That the President intends to avoid war, despite his warm and avowed sympathy for Britain, just as all of us who believe in right, justice and the supreme law of self-preservation; that whatever the President may do will be directed by the highest, wisest and most patriotic counsel; that the high command of our army, navy and air forces in conference with the heads of the Government will advise whether it shall be War, or No War, and, finally, as a true democracy, we should abide with absolute unanimity by whatever the President and the Congress will decide.*

INVOCATION

"O cruel is the conquer-lust in Hitlerian frenzied brains
The paths they plot to gain their goal are dark with shameful stains:
No faith they keep, no law revere, no god but naked Might:—
They are the foeman of mankind. Up, Liberty, and smite!

Serene and strong and full of faith, America, arise.
With steady hope and mighty help to join thy brave Allies.
O dearest country of my heart, home of the high desire.
Make clean thy soul for sacrifice on Freedom's altar-fire:
For thou must suffer, thou must fight, until the war-lords cease,
And all the peoples lift their heads in liberty and peace."

—"Liberty Enlightening the World"
with apologies to Henry Van Dyke, 1917.

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*On Tuesday, May 27, 1941, the President proclaimed the country in a state of unlimited emergency.

*A last word from the present Constituted Chief of the Medical Profession:

"We must and at no late date, establish what is to be the policy of this nation as relates to the war situation. To my mind there is nothing, and in the history of this country never has been anything, which will influence the future of America more than the nature of this decision.

"It is my opinion that if disaster should overtake us in this hazardous undertaking it would be no more terrible than what will happen to us if we are to try to isolate ourselves. The nation has been gallant in the past and it can be gallant again. I do not believe there is a safe course. In dangerous times like these I would like to make a closing statement that it is my conviction that a dangerous course has real advantages."—Frank H. Lahey, president, American Medical Association, June 3, 1941.

Ovarian Neoplasms*

J. WALTON LIPSCOMB, B.S., M.D., F.A.C.C.
JACKSON, MISS.

NO ORGAN of the body has so great a disposition to tumor, especially cyst formation, as has the ovary. The enormous proliferating power of germinal epithelium, the physiologic process of atresia and cyst formation, the monthly congestion, and the secretory power of the epithelial structures are all normal forces which it may well be imagined are readily transformed from physiologic functions to pathologic processes.

On examining the literature I found that ovarian cancers were much more common than is generally appreciated. Malignancy was present in 17.3% of Bernstein's 1,101 ovarian tumors, about one-half of which were of the proliferating variety. Lynch reports 36% cancer or 110 cases, in 302 ovarian neoplasms. Ries and Bruno found malignancy in 17.1% of 146 ovarian neoplasms. The most common form of malignant ovarian tumor was the papillary serous cystadenocarcinoma. Cancer of the ovary was found to be bilateral in 59% of Lynch's cases, 55% of Bernstein's, 45% of Szothmary's, and 72.5% of Murphy's.

No age is exempt. Hubert recorded 175 cases in which solid and cystic tumors of the ovary were found among children up to 17 years of age. Of these, sixty were malignant and 115 benign. Of the malignant tumors 32 were sarcomas and 28 were carcinomas. Dr. Charles W. Mayo and W. L. Butsch report 16 cases of ovarian tumors in young girls at the Mayo Clinic. Of them seven were simple cysts, four were dermoid cysts, three were carcinomatous cysts, one was a parovarian cyst and one was sarcoma. The largest percentage of cases showing malignancy is in the menopausal age. Two-thirds of Lynch's patients were between 40 and 60 years of age. This percentage is generally true in those reports I was able to examine.

The symptoms of ovarian tumors vary greatly. They are absent in many early cases. Pressure, menstrual irregularities, tumor mass, pain, ascites, dyspnea, loss of weight and cachexia are all noted. The special ovarian tumors with well defined hormonal activities such as the granulosa-cell tumor and the arrhenoblastomata exhibit symptoms peculiar to them. In women beyond the menopause, the granulosa-cell tumor may produce menstrual bleeding at regular intervals. Other symptoms of note are feeling of renewed youth, swelling of breast and occasional galactorrhea. The arrhenoblastoma generally produces sterility with amenorrhea, hirsutism, atrophy of breast, hypertrophy of the clitoris and changes in the voice.

The diagnosis of ovarian cysts or tumors is usually not difficult. The smooth round surface of the tumor which moves independently of the uterus is as a rule unmistakable. If however, the tumor mass is solid, there is a possibility of confusion with myomas of the uterus. Intraligamentary or adherent tumors may be hard to differentiate from a sactosalpinx, a hydrosalpinx or a tubo-ovaritis. Large ovarian tumors are sometimes hard to differentiate from a tumor of the kidney. A careful bimanual examination, along with a good history, will generally reveal the true nature of the mass. Once the diagnosis is made surgery should be advised.

The treatment of ovarian tumors is surgical. I strongly urge that all ovarian tumors be examined before closing the abdomen. If the tumor is found to be malignant, bilateral salpingo-oöphorectomy and hysterectomy should be done. X-ray treatment is then given postoperatively. Some inoperable cancers of the ovaries can be made operable by preoperative x-ray therapy.

The results of the treatment of cancer of the ovaries are discouraging. Meigs reports five-year cures at the Massachusetts General Hospital as follows: Out of 154 cases of cancer of the ovary 25 are now living or 15.5%. He states that the results are discouraging and are worse than most reports on other types of cancer. This report included only primary epithelial carcinomas. It excluded benign types of carcinoma such as the highly specialized endocrine type and betastatic lesions. Lynch reports a 35.5% five-year survival but only 11.8% of the cases were absolutely free of recurrence.

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*Read before the Section on Surgery at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 14, 1941.

Today we are reporting two series of cases at the Mississippi Baptist Hospital. Until two years ago we were unfortunate in not having a resident pathologist. It was left to the discretion of the individual surgeon as to whether the tissue removed at operation was examined by a pathologist. In one group of cases all the specimens were examined. In the other group of cases possibly 25% of the specimens were examined.

I examined the records of 250 consecutive cases of ovarian neoplasms excepting the cases which will be reported later. These were not all the cases at the Baptist Hospital but the number is sufficient for the purpose of this presentation. Of this number I found six cases of cancer of the ovary, slightly over one per cent. Four of these cases were diagnosed by the pathologist in the past two years. Only two cases were recorded as cancer in the previous seven years. I am sure we have been overlooking the diagnosis in some of these cases.

SUMMARY

1. Cancer of the ovary is more prevalent than this series of cases would indicate.
2. Early diagnosis is necessary to improve the end-result.
3. A competent pathologist should examine all neoplasms removed at the operation.
4. If cancer is found, bilateral salpingo-oöphorectomy with hysterectomy followed by x-ray is the treatment.

BIBLIOGRAPHY

1. Graves—Gynecology—Textbook.
2. Meeker & Localio—Granulosa Cell Tumor of the Ovary, New York State J. of Medicine, August, 1938, Vol. XXXVIII, pp. 1126-28.
3. Dockery & MacCarty—Arrhenoblastoma, S., G. & O., April, 1939, Vol. LXVIII, pp. 767-773.
4. Meigs—Cancer of the Ovary, S., G. & O., July, 1940, Vol. LXXI, pp. 44-53.
5. Mayo, C. W. & Butsch, W. L.—Ovarian Tumors Among Young Girls, Minnesota Med., April, 1938, Vol. XXI, pp. 256.
6. Morton, D. G.—Collective Review; Malignancy of the Female Genitalia; Review of Literature for 1936.
7. Counseller, V. S.—Ovarian Neoplasms; Their Pathologic and Surgical Significance, Am. J. of Surgery, Aug. 1940, Vol. XLIX, pp. 284.
8. Holter, H. V.—Cancer of the Ovaries, J. Kansas M. Society, July, 1939, Vol. XL, pp. 296.

A Resume of the Syphilis Control in Jones County*

H. L. BOONE, M.D.
LAUREL, MISS.

IN PRESENTING a resumé of the program of syphilis control in Jones County, it is almost impossible to give any accurate data except that which can be secured from the files of the Jones County Health Department. From the total cases reported to the Board of Health in 1936 through 1939, it has been estimated that there are between 5,000 and 6,000 cases of syphilis in Jones County by Dr. Galloway, who is later to discuss this paper, and who also is the director of the Syphilis Control Program for the state of Mississippi. Doctor Galloway is of the opinion that this estimate is a very conservative one. The total population of Jones County is around 49,000, according to the census of 1940, so it is evident that with at least 5,000 or 6,000 cases in this county that an effective control of this disease be established.

In giving a resumé of the syphilis control I am limiting myself to the program which was in effect during the year of 1940. During 1940 there were four clinics in operation, two in Laurel and one in Ellisville and Soso each week. All of these clinics has been operated by private practitioners in Jones County. Before any patient is admitted to the clinic, he must have a request for admission from his private doctor before treatment is begun. The patient must have two positive blood Wassermanns or a positive darkfield, and have a thorough physical examination, plus an urinalysis.

The clinician who examines the patient determines the type of treatment to be instigated. The routine which was used in the four clinics for 1940 was as follows:

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*Read before the Section on Hygiene and Public Health at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 13, 1941.

For the early manifest or infectious type .06 gms. of mapharsen and 1.5 cc. of bismuth subsalicylate in oil is given each week for four weeks. Following this, weekly injections of .06 gms. of mapharsen is continued for six weeks. A course of bismuth consisting of ten weekly injections of 1.5 cc each is given followed by ten injections of .06 gms. each of mapharsen. After the patient has taken thirty treatments a blood Wassermann, spinal fluid, urinalysis, and recheck of physican examination is made and treatment is continued if indicated. In almost every instance treatment is continued until at least sixty treatments have been given. Every patient of this type who is dismissed after sixty treatments is advised to have a blood Wassermann every three months and to have another spinal fluid examination at the end of one year.

The routine for the treatment of early latent syphilis, that is syphilis of less than four years duration, the same routine as for early manifest or infectious cases, is followed with exception that no bismuth is given until the patient has had ten treatments of mapharsen and then ten treatments of bismuth are given.

In the treatment of syphilis of more than four years' duration in which the patient has no other evidence than two positive Wassermanns the following routine is carried out. The first ten treatments are 1.5 cc. of bismuth subsalicylate in oil followed by ten treatments of mapharsen starting with .03 gms. for the first dose and continued with .06 gms. doses, provided there are no contra-indications such as extreme nausea or vomiting, diarrhea, or evidence of an arsenical dermatitis. These patients are usually given fifty treatments and then a spinal fluid examination is made and if found negative, the patient is discharged and instructed to return only if the disease relapses.

In the treatment of syphilis in prenatal cases our aim has been to give the patient the maximum number of doses of arsenicals. No matter how far along the patient is in her pregnancy, the first thing she receives is .04 gms. of mapharsen, which is continued for ten weeks. The ninth and tenth week of treatment the patient receives in addition to the mapharsen 1.5 cc. of bismuth subsalicylate in oil. For the next five weeks only bismuth is given and then mapharsen is started again. This routine is carried out until the end of her pregnancy. After delivery, treatment is resumed along the basis already outlined because the only consideration at that time is the health of the mother.

In cardiovascular syphilis no antisyphilitic medication is given in decompensated cases. In all cases an attempt is made to have a roentgenological study of the cardiac area before treatment is started. A careful check-up of dental hygiene is made at the start of treatment on these cases, because when teeth are found normal the patient seems to respond to treatment more readily. All cases of cardiovascular syphilis are watched closely for any signs of decompensation and if these appear treatment is immediately stopped. These patients are first given ten injections of 1.5 cc. each of bismuth at weekly intervals then mapharsen in small doses for ten weeks, the usual dosage being 0.2 gms. the first week and .04 gms. each week thereafter, provided the drug is tolerated. The cases which respond have usually required an average of seventy injections each.

During 1940 there was a total of 784 patients treated in the Jones County Health Department clinics, of which group there were 99 white and 685 colored patients. There were 13,585 treatments given, making an average of 17.3 treatments per case treated. There were 5,695 injections of mapharsen given and during the year there developed 13 cases of arsenical dermatitis, all of which were mild and promptly cleared up on discontinuing mapharsen. There were no gluteal abscesses developed during the year and it was not necessary to stop treatment of any patient because of complications arising from bismuth therapy.

During 1940 there were 523 patients who had an opportunity to receive at least 20 treatments of mapharsen and 20 treatments of bismuth. Of this number 258, or 49.3 per cent, were adequately treated, that is to say they received 20 injections each of mapharsen and bismuth.

The blood picture obtained on the 258 patients who were adequately treated was as follows:

Positive Wasserman and positive flocculation test: 67—31.6 per cent.
Negative Wassermann and positive flocculation test: 48—22.6 per cent.
Negative Wassermann and doubtful flocculation test: 26—12.3 per cent.
Negative Wassermann and negative flocculation test: 71—33.5 per cent.

The number of early cases in this group, which includes the primary, secondary, and early latent cases, was 110. The blood picture on them was as follows:

Positive Wassermann and positive flocculation test: 19—21.8 per cent.
Negative Wassermann and positive flocculation test: 18—20.7.
Negative Wassermann and doubtful flocculation test: 11—12.7 per cent.
Negative Wassermann and negative flocculation test: 39—44.8 per cent.

The number of late cases having adequate treatment was 134 and of this group 115 had a blood test and the results were as follows:

Positive Wassermann and positive flocculation test: 42—36.5 per cent.
Negative Wassermann and positive flocculation test: 30—26.1 per cent.
Negative Wassermann and doubtful flocculation test: 11—9.6 per cent.
Negative Wassermann and negative flocculation test: 32—27.8 per cent.

There were 10 congenital cases adequately treated and who had a blood test after adequate treatment. The results of these were as follows:

Positive Wassermann and positive flocculation test: 6—60 per cent.
Negative Wassermann and doubtful flocculation test: 4—40 per cent.

From a comparison of the above group of cases it is evident that the best results were obtained, that is, insofar as a reverse in the Wassermann test was concerned, in the early cases; and the poorest results were in the congenital groups. The various present day serological tests in use are very much more sensitive than they were only a few years ago. The patients today who show a positive or doubtful Kline-Young flocculation test in such a large percentage of cases would have a few years ago shown a negative Wassermann test and been considered as free from syphilis insofar as the blood test picture is concerned. It seems evident that today we are finding a large group of patients who have been adequately treated and are clinically well but still show a positive serological test for syphilis. It is therefore felt that in a large majority of these cases it is undesirable to continue therapy when the patient has received adequate treatment and the only evidence for further treatment is a positive Kline-Young flocculation test.

DISCUSSIONS

Dr. F. L. Risher (Soso): Inasmuch as Dr. Galloway, who is director for the syphilis control program in the state of Mississippi, has discussed Dr. Boone's paper, I feel that I can only add to what has been said by giving a few observations which have been made during my association with Dr. Boone in the syphilis clinic at Laurel and the clinic which I ran at Soso. One thing in Dr. Boone's paper which struck me so forcibly was his statement that there were at least five or six thousand cases of syphilis in Jones County with only seven hundred and fifty receiving treatment, thereby leaving over four thousand cases untreated. This is due primarily, I think, to the fact that a great majority of syphilitics have no clinical symptoms sufficient to warrant consulting a physician. In a survey of the records of the Jones County Health Department I discovered that only about 50% of the patients had any complaint at all when inducted into the clinic for treatment. Further and still more amazing is the fact that only 55% had any physical findings worthy of mention or helpful in the clinical diagnosis of syphilis. You may also be surprised to know that in 1940, 784 cases gave only 150 positive histories of primary lesions. From the above facts, as Dr. Boone brought out, an effective control of syphilis in this county is essential; but what I wish to emphasize is that the problem seems to be one of detecting those cases which would never come under observation of a physician because of the benign clinical course of their affliction. A great many of our cases were detected as food handlers, servants, or workers in industrial plants where Wassermanns were required. Most of these individuals had no idea that they had "bad blood."

Our routine for treatment is based on recommendation by the Mississippi State Board of Health, Division of Preventable Disease Control, which Dr. Boone has presented to you. As he stated, mapharsen is the arsenical we use. I think it is responsible for the good results we have obtained and remarkably few complications we have had in our clinics. I have not seen a single immediate or serious reaction as a result of mapharsen injections. We have had no sloughs and mighty few sore arms since we have been using this drug. The principal reaction seems to be gastrointestinal, ranging from slight nausea to vomiting and diarrhea, the diarrhea being the least frequent of the three. As far as I have been able to determine clinically, none of our patients who did not already have renal or hepatic diseases, developed them during their mapharsen therapy. As Dr. Boone stated, we had only thirteen cases of arsenical dermatitis and these were very mild and cleared up on discontinuing the arsenical. In this connection, I wish to emphasize that we do not consider sodium thiosulphate as of value in the treatment of this condition. This viewpoint has been arrived at by experience and the recommendations of authorities such as Moore.

Dr. Boone's statement that the more sensitive serological tests for syphilis account for the apparent increase in Wassermann fastness, which should be emphasized as it offers an explanation for this perplexing situation, in many cases which are symptom free after having received adequate treatment and yet have positive serological tests for syphilis. Even the Wassermann test is more sensitive than formerly, not to mention the very sensitive Kline-Young and the less sensitive Kahn. In this connection I wish to quote a paragraph from Moore on the psychology of Wassermann fastness as it affects the patient:

"The intelligent syphilitic patient, faced with a period of treatment measured in terms of years, insists on some tangible evidence of improvement. After his lesions, if he has any, heal, the only scale by which he can measure improvement is the Wassermann test, concerning which there is a surprising amount of information and misinformation among the laity. He wants to know what progress is shown by repeated tests during treatment: "Doctor, how many 'pluses' were there?" And he is often so desperately disappointed by persistent Wassermann positivity that he becomes depressed and pessimistic as to the future, or that, discouraged at his apparent failure to improve, he abandons treatment before the allotted minimum has been given. I believe it wise to explain the situation to the patient in detail; to point out, if he has cardiovascular, visceral, or central nervous system syphilis, the aim of treatment has literally nothing to do with the reversal of the blood Wassermann, but is based entirely on the recovery and maintenance of physical health; to explain, if he has osseous, latent or late congenital syphilis, the desirability of prolonged treatment and subsequent observation from the standpoint of prophylaxis for the future. In such cases, it must be emphasized that a persistently positive blood Wassermann is compatible with good health and long life. Also—and this is very important—the Wassermann fast individual may, after appropriate treatment, marry and have children with no more danger of transmitting infection to spouse or offspring than if his Wassermann had become reversed to a permanent negative. Potential infectiousness in late syphilis and Wassermann fastness have nothing to do with each other. The average Wassermann fast patient requires intelligent reassurance, and a great deal of it."

Dr. D. V. Galloway (Jackson): I appreciate the privilege of being able to discuss Dr. Boone's splendid paper on Syphilis Control in Jones County.

This county is carrying out one of the best venereal disease programs in the state. Syphilis clinics were established in Jones County in 1937 and have continually improved in the efficiency of clinic operation. This is indicated by the fact that a survey of this department made by Dr. Erickson and myself in 1939 showed that approximately 30 per cent of the patients were receiving the minimum of 20 arsenical and 20 heavy metal treatments necessary to render them permanently non-infectious. Dr. Boone has shown this percentage has been increased to approximately half of the patients (49.3 per cent). This is a very good showing and will certainly reduce the incidence of syphilis if continued long enough.

His finding that 44.8 per cent of the primary, secondary and early latent cases had been rendered Wassermann negative by the 20-20 routine, while only 26 per cent of the late cases had become negative was in line with the findings of the Associated Clinical Group that early syphilis is much more responsive to treatment. His finding that congenital cases all have positive or doubtful Wassermanns is also as would be expected, for congenital cases of syphilis furnish a large percentage of Wassermann fast cases.

Dr. Boone has discussed the medical phase of syphilis in its control, but it should be pointed out that the State Board of Health is, at the same time, carrying out a broad program of health education of the people in regard to the cause, spread, and prevention of venereal diseases. This program is complemented by a series of moving pictures, bulletins, news articles, talks, etc.

It is realized also that many agencies such as the NYA, Boy Scouts, Girl Scouts, YMCA, YWCA, and other clubs and societies that provide wholesome recreation and constructive activities are positive factors in helping to prevent the spread of venereal diseases. Improper recreation such as may sometimes be found connected with road houses, "juke" joints, unless properly supervised, may furnish an unwholesome atmosphere in which opportunities for the spread of venereal disease may flourish. These forces are particularly pernicious in their influences on our young boys and girls.

Within recent months the National Defense Program has imposed a very special problem in trying to secure through the Selective Service Act, healthy citizens who may be inducted into the Army. Our records indicate that one in four of the Negro citizens have been found to have positive Wassermanns and one in thirty among the white civilians. This is in line with morbidity reports by the physicians through the years and the findings of numerous syphilis surveys which have been made. On this basis it has been estimated that 4 per cent of all white people in Mississippi and 25 per cent of all Negroes have positive Wassermanns on examination. This indicates a total of more than 300,000 cases of syphilis at this time in the state.

We are operating approximately 165 venereal disease clinics in 50 counties with a patient load of approximately 18,000 cases per week. This clinical program would not be possible without the assistance and coöperation of the 250 private physicians who examine the patients and administer the treatment. We appreciate this assistance from the medical profession and would not be able to operate without it. The Army authorities have coöperated both through the Selective Service and through army authorities at Camp Shelby.

The State Board of Health, with the assistance of the physicians, has reason to believe that if this program can be properly expanded and continued we may bring syphilis under control in a reasonable period of time.

DR. F. J. UNDERWOOD (Jackson): May I ask a few questions of Dr. Galloway? If I am practicing medicine and have a number of cases of syphilis that I want to report to the clinic—I do not want to clutter up my office with them—how do I get them into the clinic?

DR. GALLOWAY: We consult the local medical societies whenever we enter a county and in general the doctors have felt that any patient who is served by a private physician who is not able to pay, is eligible to our clinic.

DR. UNDERWOOD: Could I send a patient over to the clinic and say to him to go over and tell Dr. Ricks or some other physician that I said to treat him. Would he get treatment?

DR. GALLOWAY: I imagine he would call you up and say, "This fellow says this, but please send me a message to that effect."

DR. UNDERWOOD: Is a written request from the doctor over his own signature needed?

DR. GALLOWAY: Yes.

DR. UNDERWOOD: In a lot of states witnesses certify the patients. In this state only the doctors can. Is that true?

DR. GALLOWAY: Yes, and in some states they are not certified at all. The workers just go out and find them.

DR. UNDERWOOD: That clinic is conducted by private practicing physicians who agree to work in the clinic?

DR. GALLOWAY: Yes.

DR. UNDERWOOD: And when you send a case to the clinic that does not mean the health officer is going to treat him, but a private physician, who is paid so much per hour for his services?

DR. GALLOWAY: Yes, and the army has removed many from our clinics, and we are already 200 or more short, placing us in difficulty about it now.

DR. F. M. SMITH (Vicksburg): One of the first problems I have in syphilis control is of the number that come to us monthly there is a very small percentage who come in the early stages of the disease when there are practically no manifest symptoms. We are familiar with the teaching that one-third of all syphilis cases may not show a primary lesion or have a hard chancre, but I am just wondering how in the world we can get the cases that are developing. into these clinics earlier? We probably have three to five thousand white and colored in our county, very few of whom have developed syphilis within the last five years, and we must treat them after they have advanced to the really latent stage. Another problem is taking a blood Wassermann from expectant mothers. We are told that 60% of expectant mothers will not give a positive blood Wassermann, and yet they are expectant, and we have to manage them. Of course, in time we will get histories—histories of miscarriage that will contribute to the diagnosis, but that is the problem we have to handle now.

Another problem that bothers me a great deal is that we have so many cases that come to us in which we run a blood serology which is negative, and we find that some one has given them one, two, three or four shots, but it seems to me nearly 100% of them have had just a few shots of mapharsan when we run a negative serology. On the other hand, we find some still with a positive showing.

Another problem is that many begin but few hold out. As for the draftees in our county, we treat those by consent of the judge and court and the doctors without a certificate. We treat the expectant mother without a certificate from the doctor; they have agreed that she should have it, and we do not lose any time about it.

Another thing that is a puzzle to me and rather irks me is that I have seen boys who have taken half a dozen shots, have a negative serology for the local board and go on to camp. Another group on whom I have run a plus test on perhaps are put in Class B-2. We should raise that classification. It is going to be raised in Warren County.

DR. GRAY (Jackson): We still have letters from physicians wanting to know whether we are supplying drugs for their private patients, even though we sent out a letter two or three years ago about it. Our position at the present time is that we will supply drugs to private physicians for all of their patients regardless of their ability to pay, and our purpose is to make it possible for both pay and non-pay patients to have treatment in their own doctors' offices. If there is a full-time health office in the county drugs may be obtained through that office. If there is no full-time health office, write to the State Department and the drugs will be sent.

Medical Service at a Large Military Training Camp*

MAJOR GEORGE LEONE, AND CAPTAIN BUFORD WORD,
CAMP SHELBY, MISS.

SINCE this is mainly a group of surgeons composing your Section on Surgery, I would like to enumerate what comes under a surgical service in a large station hospital. This hospital has a bed capacity of 2000, on an expansion possibly to 2600. It serves now as it stands a population of 45,000 soldiers and officers. The care of dependents at that hospital is not authorized. The patient population today is approximately between 1200 and 1300. We have admitted to date to the hospital over 11,000 patients. In mentioning that number one must remember that we admit many more cases than would be admitted to our civilian hospitals.

The surgical service—and it may interest many of you as it may become necessary in the expanding program for some of you to take over the surgical service of some of the general hospitals that still are on paper—is organized on the basis of about nine departments. There is the chief, who has under his direction more or less administratively, not necessarily professionally, the general surgical section, the orthopedic section, the eye, ear, nose and throat section, urology, venereal disease, the section on radiology and x-ray, the section of operating room and anesthesia, and also physiotherapy. All these departments come under the chief of surgeons for purposes of administration.The function of the hospital at Camp Shelby is not only to provide for the care of the soldiers, but also to train. The few officers who came down to this place to organize it had to depend entirely upon the Reserve Medical Officers who were sent to us particularly from the Fourth Corps Area, which included the states of Louisiana, Florida, Mississippi, Georgia and Alabama. Those physicians today make up the hospital staff at Camp Shelby, which began to function on January 1, 1941, approximately six weeks after the first group arrived to take it over, and the first operation was performed on January 1. The Surgeon General was down for a thorough inspection and put his O.K. on it.

(Motion picture of scenes at Camp Shelby presented here by Dr. Buford Ward.)

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*Read before the Section on Surgery at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 14, 1941.

A Surgical Clinic

ISIDORE COHN, M.D., F.A.C.S.
Senior Surgeon, Touro Infirmary; Senior Surgeon, Charity Hospital
NEW ORLEANS, LA.

(1) Umbilical Fistula (Patent Urachus)
(2) Contracture of Finger Following Burn
(3) Dupuytrens Contracture

THE FIRST CASE to be presented is that of a two-year-old white child who had a persistent discharge from the umbilicus. The child has been under observation by various physicians since birth. The only treatment consisted of attempts to keep the parts dry and the skin from being irritated. At various times physicians have applied nitrate of silver topically with no effect.

Such a history at once should make one think of the possible causes for a weeping umbilicus.

Because the general practitioner, the obstetrician, as well as the pediatrist, so often see an irritation around the umbilicus within the first few weeks of life, and particularly the persistence of what looks like a granuloma, the many possible causes for polypoid-like masses in the region of the umbilicus are often overlooked.

The classic work of Dr. Thomas Cullen, "The Umbilicus and Its Diseases," has made information relative to umbilical diseases and anomalies easily accessible for any clinician who would adequately care for infants.

We must not forget the fact that the umbilical cord carries not only arteries and veins, but the vestigial remains of two important structures of fetal life, the urachus and the omphalo-mesenteric duct.

Of the many conditions which must be thought of when there is either a polypoid growth or a weeping umbilicus, only three will be discussed:

(1) the simple granuloma,
(3) the umbilical polyp, and
(3) umbilical urachus or an omphalo-mesenteric duct.

Anything which looks like granulation tissue or polypoid tissue in the region of the umbilicus should immediately arouse suspicion of the possibility of either a simple granulation tissue polyp, or it may represent the remains of a persistent omphalo-mesenteric duct, (which may be connected with the intestinal tract either by a fibrous cord, or by a persistence of the duct in the form of a Meckel's diverticulum), or it may represent a patent urachus. The differential diagnosis of these conditions offers comparatively few difficulties.

The simple granuloma is represented by a small strawberry-like mass of granulation tissue which has no direct connection with any intra-abdominal condition. Microscopically it is characterized by nothing except new blood vessels and simple granulation tissue. This is the most frequent umbilical abnormality. The treatment of it is so simple that one often confuses the simple granulation tissue or polyp for other conditions, and for that reason not very much is done about it. Snipping the granulation tissue off and applying an astringent, such as nitrate of silver, is all that is necessary. If it recurs, more must be done.

A great deal of worry and future trouble can be avoided by having the tissue submitted to a pathologist for examination. If nothing but granulation tissue is found one may be sure that he is not dealing with a persistent omphalo-mesenteric duct or with a patent urachus.

Umbilical polyps represent the most common manifestation of the persistence of an omphalo-mesenteric duct. There is a mucoid secretion which persists particularly in these polyps where the duct has become separated from the intestinal tract by a fibrous cord. The persistence of this mucous secretion or weeping type of umbilicus should arouse one's suspicion immediately as to whether one is dealing with a persistent omphalo-mesenteric duct or with a fistula connecting the bladder with the umbilicus in the form of a persistent urachus. Such umbilical polyps are not either cured or helped by snipping off the polyp or by the use of astringent materials. Here again the histologist can be of great help. In the event that it is a persistent omphalo-mesenteric duct, there will be evidence of mucosa similar to that of the bowel and in some instances similar to gastric mucosa.

A patent urachus is one of the common causes of the persistence of an umbilical fistula. A patent urachus like the omphalo-mesenteric duct is associated with a clear secretion or weeping umbilicus, as well as a small tumor-like mass in and about the umbilicus. The polypoid growth usually suggests granulation tissue in appearance.

Our first duty is to attempt to make a differential diagnosis. Without an accurate diagnosis proper treatment cannot be instituted. The x-ray can aid us a great deal. Injection of a contrast material through the sinus will give in most instances a very clear indication of the origin of the sinus. If the sinus tract parallels the rectus muscle downward toward the bladder almost in the midline, it is suggestive of a patent urachus. At times the contrast material may get into the bladder itself, then the diagnosis is clear. If, on the other hand, the course of the contrast substance is directed downward and backward for a short distance, it is suggestive of a persistent omphalo-mesenteric duct. If there is a patent duct and a Meckel's diverticulum the contrast substance will flow into the bowel itself.

A small fine silver probe also will often aid in making the diagnosis. If the silver probe follows along downward toward the bladder behind the linea alba, combined with a weeping from the fistula, the information suggests a patent urachus.

In either event surgery is definitely indicated. The management of a persistent omphalo-mesenteric duct or a patent urachus requires surgical intervention.

The management in both instances represents an anatomic dissection based on one's knowledge of the course of these foetal structures. It is to be remembered that the urachus has its origin from the summit of the bladder as a rule and it extends upward to the parietal peritoneum and behind the rectus sheath between the two hypogastric arteries and veins reaching the umbilicus as a pro-peritoneal structure and not as intra-peritoneal structure. In approaching a patent urachus it is important to make an adequate midline incision below the umbilicus and to circumscribe the umbilicus itself so that the entire fistulous tract including the umbilicus with the secondary inflammatory tissue so often found in the persistent urachal fistula can be excised.

The operative procedure which I utilize is best illustrated by the operative record of the case which forms the basis of this report.

OPERATION

Primary incision is made from just below the level of the umbilicus in midline to just above the symphysis. The skin and subcutaneous fat were incised and retracted, all bleeding points were clamped with mosquito forceps. In order to complete the incision a second incision was made beginning just above the umbilicus and circumscribing the umbilicus to form an elipse, with the lower ends of the elipse blending into the primary mid-line incision which formed the lower pole. A probe was introduced into the sinus at the umbilicus and this seemed to extend down through the sinus to the level of the symphysis.

In order to identify clearly all structures and because of the thinness of the peritoneum, the umbilicus was split in the midline so as to expose the upper portion of the persistent urachal sinus. The sheath of the left rectus was incised and the muscle retracted. When this was done the urachus could be seen between the peritoneum and the posterior portion of the rectus sheath. On account of the thinness of the peritoneum it was necessary to open the abdominal cavity for the entire length of the incision. The small vessels which were adherent to or attached to the urachus, were clamped and ligated after they had been separated from the urachus. The dome of the bladder was exposed and the posterior parietal peritoneum covering the posterior aspect of the bladder was then exposed. It was seen that the urachus descended between the posterior parietal peritoneum and the bladder; therefore, the posterior parietal peritoneum was incised down to the level of the iliac vessels. The urachus at this point seemed to be so intimately in contact with the right ureter that it was decided to ligate the tract just proximal to the ureter. This was done, chromic catgut was used and the proximal portion of the urachus was clamped—leaving a tube about four or five inches in length so the umbilicus could then be circumscribed and excised in one piece. After this procedure the next thing was the closure of the posterior covering the posterior aspect of the bladder.

In the peritoneum on either side of the midline we noted two rather prominent tube-like remnants which I believed to be the hypogastric arteries. These were separated from the surrounding tissue and ligated close to the bladder, and both were then excised.

The abdomen was closed with tier sutures.

If the entire tract is removed and all connections between the bladder and the umbilicus severed there should be no further trouble.

If one is dealing with a persistent omphalo-mesenteric duct in which a fibrous cord connects the intestines with the umbilicus it is important to make an adequate incision so as to circumscribe the umbilicus. After the peritoneum is opened, sever the cord-like structure from the bowel wall. If on the other hand there is a persistence of the duct in the form of a small diverticulum this diverticulum must be excised and the opening in the bowel sutured as any other enterotomy would be closed. Care must be taken in these instances to avoid narrowing the bowel lumen.

The only excuse for presenting such a case as this is the old story that "familiarity breeds contempt": and the fact that granulation tissue about an umbilicus is so common and a patent urachus or omphalo-mesenteric duct comparatively rare, that patients go on treated, yet untreated, for a long period of time until eventually someone thinks of the condition which the original physician entirely overlooked. This is just another illustration of the necessity for considering all possible conditions which may be associated with simple everyday experiences of the general practitioner, the surgeon and pediatrist.

* * * *

The second case which I would call attention to is one of a contracture of the little finger which followed a burn fourteen years ago.

The patient in question is a girl about sixteen years of age, who when two years of age had a burn on her hand. When this patient came under observation, the little finger was contracted, flexed on the palm, the antero-posterior diameter of the finger from the metacarpo-phalangeal joint to the phalangeal joints two and three, was about four times the thickness of the other fingers of the same hand, due to a tremendous amount of scar tissue.

When a case of this type is seen there are several things which are self evident:

(1) Such contractures are avoidable in most instances.

(2) The persistence of a contracture of this nature is of necessity associated *with a contracture of the flexor tendons* and in some instances atrophic changes in the phalanges of the particular finger.

At times it is associated with synostoses between the phalanges.

(3) What is to be done about it?

The subject of burns is of more than passing interest to every community. Burns from all causes take a heavy toll in life and economic usefulness each year.

In the management of a burned extremity the patient should be made to keep up voluntary motion, or traction used to avoid contractures.

By so doing there will not be the need for so many "post-burn" plastic operations. Early skin grafting associated with early movement and extension to avoid contractures are effective measures in preventive surgery, if by preventive surgery we mean the avoidance of extensive secondary plastic operations.

(4) The statement was made "of necessity contractures of the flexor tendons are associated with skin contractures of long standing." It should be hardly necessary to mention the fact that if a finger has been flexed for ten, twelve, or fourteen years as in this case, there will be contractures of the flexor tendons from disuse, as well as a stretching of the extensor tendons from position. It is obvious that the mere excision of scar tissue (skin and sub-cutaneous fat, and the prolongations of the palmar fascia), will not permit the straightening out of the finger. One must consider additional procedures including tendon lengthening and grafting. This naturally brings us to the third question: What is to be done? A planned operation is of necessity the only likely way to obtain good results. The stages of the operation may be considered as follows:

First, a bloodless field should be obtained. Every care should be taken that any type of tourniquet should not be kept on more than three quarters of an hour, for fear of the development of a tourniquet paralysis.

Second, even though some advocate local anesthesia, it is my judgment that general anesthesia in one form or another is preferable to local anesthesia. I believe that infiltration anesthesia interferes with the blood supply to the tissues to some extent due to edema produced by infiltration. If one uses adrenalin (which I never do), there may be secondary bleeding in a wound which is perfectly dry when the operation is completed.

Having secured an ischemic field the scar tissue is excised entirely, after which the tendons are exposed. Efforts should be made to avoid injuring the digital nerves and arteries if possible.

Third, the lengthening of the tendon: This may be done by plastic operations either mortis and tendon type of section, Z shaped incision, or by a tendon graft transplant. My preference is tendon graft. The reason for this preference is that the flexor tendons of the fingers are not very large and the amount of suturing which is necessary sometimes interferes with the blood supply of the tendon. If one has available a tendon which can be removed without producing disability this tendon can be used as a graft.

The preferred tendon is the palmaris-longus. Having decided upon using the palmaris-longus tendon, an incision is made over the forearm just above the annular ligament to expose the tendon. Sufficient length of the tendon is then excised. This is sutured to the proximal portion of the flexor tendon at the proposed point of the section, and then the flexor tendon cut, thus allowing the finger to become extended; the distal portion of the graft is then sutured into the distal portion of the flexor tendon. The next stage consists of taking a free skin graft from the thigh or abdomen as desired (not leaving too much fat on the under surface), for the purpose of repairing the defect. With the finger extended an adequate dressing is applied. Avoid pressure over the grafted area for fear that pressure might interfere with nutrition. Elastic pressure with a rubber sponge is used to avoid accumulation of bloody serum under the graft—(which in itself would cause the graft to be floated away.) Immobilization with a plaster splint, either in the neutral position, or with the wrist in palmar flexion is indicated to avoid tension on the suture lines of the interposed grafted tendon.

Restoration of function is attempted as soon as the skin graft has shown evidence of adequate viability. Operative infection in these cases result in failure. There is no place in surgery which requires more scrupulous attention to aseptic technic, absolute hemostasis and the avoidance of tension on suture lines.

Anyone attempting this type of work will be rapid if he gives meticulous attention to every detail. Minor operative procedures and forcible stretching are not to be considered in the management of any type of hand contractures. The restoration of an individual to full usefulness in these cases is sufficient in itself to give one great joy.

CASE

Dupuytren's Contracture

The next case logically follows since we have a contracture following a burn.

Brief History: The patient, an intelligent, cultured, gentleman of about fifty years of age had an injury to his right hand several years ago. The original injury was a fracture of the fifth metacarpal, the end result was a vicious union of the fracture. He suffered no inconvenience until a few weeks ago, when he noted some stiffness of the little finger and some sensory disturbance on the ulnar side of the finger. The patient came under observation because he thought that the slight limitation of motion of his finger and the sensory disturbance were sequelae of the injury seven years ago. Careful examination of his hand immediately directed attention to the real cause of his trouble.

Physical Examination: No marked difference in the appearance of the two hands, except that there seems to be some atrophy or absorption of fat on the dorsum of the hand, particularly the third, fourth and fifth metacarpal regions. There is no recession of the knuckle line. When attempt is made to extend the little finger of the right hand, it remains noticeably flexed, particularly the terminal phalanx. There is a slight difference in the color of the skin on the volar aspect of the little finger of the right hand. Patient is able to make a fist completely. Abduction, adduction, pronation, and supination of hand are not limited. No pain over any of the carpal bones. There is no alteration of the contour (that I can make out), except the fifth metacarpal on the right hand. This is particularly noticeable on the ulnar side of the fifth metacarpal. I believe that there is an outgrowth of bone on the lateral aspect. The skin is freely movable over the fifth metacarpal. There is no loss of sensation on either side of the little finger. No loss of sensation over the dorsum or volar aspect of the hand. When pressure is made over the ulnar side of the palm decidedly more flexion of the little finger on the right hand results than when pressure is applied to the left hand in the region of the little finger. When the little finger of the right hand is hyperextended, one can see a distinct sulcus in the palm of the hand to about the level of the fifth metacarpal.

An x-ray was taken and this confirmed the impression of a vicious union of a fracture of the fifth metacarpal.

It was clear that the fracture of the fifth metacarpal, even though there was a vicious union, had nothing directly to do with the slight flexion of his finger. From the clinical finding contracture of the finger and nodular thickening in the palm especially when extension of the finger was done, a diagnosis of Dupuytrens contracture was made.

Operation was advised and proceeded with

Pre-Operative Diagnosis. Dupuytren's contracture operation:

Incision was made from the upper, outer limit of the palmar aspect, down to the lower flexure of the palm and then this was continued outward to the upper limit of the ulna side of the palmar space. Triangle flap was dissected away from the flexor tendons and the lumbrical muscles were exposed. The superficial palmar artery was exposed, and the ulnar nerve and the palmar arch. All of the fascia was excised and the tourniquet removed, only a few vessels having to be ligated. The palmar arch was seen and its branches were seen pulsating. Some prontylin powder was put in the wound and the skin edges approximated with interrupted fine dermol sutures. Thick gauze dressing applied and hand put up in a cock-up, dorsi flexion position.

Plaster splint placed on the dorsum.

Postoperative diagnosis: Same.

COMMENT: The etiologic factors of Dupuytren's contracture have never been determined. It is usually found in the later decades of life. There may or may not be a history of trauma, and whatever trauma has been noted is usually multiple rather than single. The condition occurs in both hands. The disease is a slowly progressive condition, first involving one finger and then the other. At times it becomes disabling because of the amount of contracture of the fingers.

Any operative intervention must be done with a view of excising the entire palmar fascia as well as at times a prolongation which extends down on the volar aspect of the fingers. One must keep clearly before him the extent of the palmar fascia and its relationship to the important structures within the palm. Failure to do this will result in a more permanent damage to the hand than existed prior to the operation. Injury to the median nerve if unrecognized will produce a permanent disability.

Practical application of anatomic knowledge is indicated in these cases.

Ewing Fox Howard Memorial Oration*

RUDOLPH MATAS, M.D.
NEW ORLEANS, LA.

IT WAS in 1895, 45 years ago, that I first met Ewing Fox Howard, then a freshman matriculate in the Medical School of Tulane University. He was then twenty-one and I thirty-five. I had just been elected to the chair of surgery and he was a member of the first class that sat on the benches before me. He soon became prominent among his classmates as an earnest and brilliant student, showing from the start qualities of leadership—an impression that I soon confirmed as we came in frequent contact during the undergraduate years that preceded his graduation as M.D. in 1897.

He established himself in general practice in his home in Vicksburg, where the same qualities of leadership that had distinguished him as an undergraduate soon asserted themselves in the esteem of the profession and the public of his native city. The friendship between us that had begun so well at the medical school was continued and kept warm by his frequent visits to New Orleans, and especially to my clinic at Touro Infirmary, where he was always a welcome visitor. He was then preparing for the specialty of ear, nose and throat, which he adopted as exclusive practice in 1916.

His wedding in 1907 to Miss Reber, whom he met at New Orleans, and whom I knew as a noble helpmate, contributed immensely, with the love of their children, to his success and happiness.

His constantly growing clientele and sleepless activity in promoting the growth and prosperity of the Mississippi State Medical Association, and my own increasing responsibilities, kept us both too busy at home to continue the frequent contacts of earlier years, but we kept in touch with each other with warm friendship. Eight years have now elapsed since his untimely passing, June 9, 1933, and we had not met since the meeting at Hattiesburg, in 1915, when he was secretary.

My recollections of him, even as he appeared to me in his undergraduate days, are most vivid and pleasant. As I recall these impressions as they appear in the light of the numerous tributes that have been published since his death, I am struck by the universal agreement with the impressions I gathered of him in his youth, and that are now recalled clearly, despite the long lapse of time. This is not surprising when we remember the dominant traits of his dynamic personality; the virile caste of his features, his clear, penetrating, grayish blue eyes, peering from deep sockets under overhanging but smooth brows, the forehead spreading broadly upwards in a straight line with the face until lost in the fringe of blondish chestnut locks that covered his well rounded dome. Then there was a nose, straight and strong but not fleshy, overhanging the shaven upper lip; and a mouth of classic length which, on opening to smile or laugh, exposed a row of powerful incisors flanked by round-tipped canines. The rather small, rounded, hairless chin and almost horizonal jaws set the face in a rather square frame which rested on a thin, long neck, as a pedestal to a very animated sculptured head. This picture gave the impression of a strong, fixed and unchanging individuality, in which an indomitable and assertive will, combined with fearlessness, absolute honesty, frankness, and a high sense of duty, were clearly reflected with fidelity as on a looking glass.

It would seem superfluous to attempt even a linear delineation of the fact of one who not so long ago moved in your midst at these meetings as a living reality, one whom all loved, honored—we might say obeyed—as a leader of spotless character, who, as the champion of organized medicine, had literally consecrated the best years of his professional life to the welfare of this association with a singleness and purity of purpose which "few have equalled and none has surpassed." But when I learned that I was to speak during the hour that his fellows have dedicated to his memory, I could not resist the impulse to transscribe the memories that nearly half a century of loyal friendship have indelibly impressed in my mind in the way I have attempted to convey. It is also a source of profound gratification that my early prognostications of his future career, before he had ripened into professional manhood, have been so marvelously fulfilled.

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*Delivered at the Seventy-Fourth Annual Session of the Mississippi State Medical Association, Biloxi, Miss., May 13, 1941.

It is also a happy coincidence that the first Howard Oration should have been delivered in this place, possibly the same spot, and about the same date sixty years ago, and that Dr. G. S. Bryan, of Amory, and I should be the only two of the seven orators who could speak of Ewing Howard with that feeling of profound personal sympathy and admiring affection that can only arise from a long sustained and loyal friendship. Besides, the day is fast approaching when all the memorial orators who could claim a personal acquaintance with Ewing Fox Howard will have vanished, and nothing will be left of any of them or of him but tradition and history.

Dr. Bryan said in his beautiful address (May 15, 1935) that he "had known, watched and loved Ewing Fox Howard for thirty years." During this time he had been associated with Howard as a colleague, working with him for the good of the profession of Mississippi, and in this way he knew Howard in the full plentitude of his most forceful activities. It was my fortune to have known Howard 45 years ago, in the bud and early expansion of his professional career, and I knew him long and closely enough to cherish his friendship and to foresee the noble role that he would play in the medical history of his state, as a great exponent of medicine as applied to the needs of the state of Mississippi (for which there is no greater proof than his presidential address at Jackson on May 12, 1931).

Quoting from Dr. Bryan's address, in which he said, "I could spend all the time that has been allotted to me on this program pronouncing enconiums that would be both true and deserved, but they would be entirely futile; for no one who hears me speak this evening but knows Ewing Howard's life and work were an honor to the profession that he so richly adorned." All this that Dr. Bryan has said I beg to reaffirm with an emphatic "Amen!"

This occasion is particularly agreeable to those of us who knew Howard personally, as it gives us an opportunity to talk of him and of his achievements, just as we could have talked to him in life, of the many things that he did which made us proud of his fellowship and friendship. We realize full well that he is beyond the hearing of our praise or of the perfume and the beauty of the flowers that here symbolize the affection and gratitude of those who loved him and who benefited by his presence while living. But those of us who are called to speak of him at this memorial hour are not addressing the inanimate *dead,* but speaking to the living hundreds of the present generation and the host of others to follow who, profiting by the unity, the power, the prosperity and the cultural influence of the Mississippi State Medical Association, may be encouraged to emulate that valiant knight of the profession who helped to shape the course of organized medicine in Mississippi to its greater and higher destinies. Therefore, with all the affectionate memories that crowd upon me at this moment, I bow in reverence to the memory of that great and noble soul, *Ewing Fox Howard.*

Public Health In National Defense*

FELIX J. UNDERWOOD, M.D.
Executive Officer, Mississippi State Board of Health
JACKSON, MISS.

THE CONSTITUTION of our great United States guarantees to each of us the right to life, liberty and the pursuit of happiness. Right now, these ideals and traditions are threatened as never before, and we face the cold, sober truth that continuation of our American way of life depends upon our ability to defend our interests by main physical strength. There are increased duties for all of us in the supreme effort being undertaken for national safety and security. The whole defense problem is so vast that it seems immeasurable, and its ultimate solution and success—like that of any huge undertaking—are going to depend upon intelligent coöperation, careful planning and unstinted sacrifice. We need more than ever before to organize efficiently and completely all of our people and our resources for the achievement of a common goal consistent with long-standing American ideals.

Efficiency in defense depends upon the capacity of people as well as of machines; and upon the whole civilian population, not just the fighters. Today's world conflict is not primarily a struggle between armies but between the total efficiency and the total productive ability of the nations at war. This means that the health and efficiency of the worker—and of any and every one engaged in the effort to create and maintain modern equipment, counts for just as much as the health and efficiency of the men who carry the rifles, who pilot the planes, and who drive the tanks. If ever we needed to put to work fully those fundamentals of medical science which we know will promote and conserve the health of our 131 million citizens, we need to do so now. We have been giving much time already to curing the sick and preventing disease, but in the light of present-day findings, we cannot assume that absence of disease necessarily means positive physical fitness.

Public health, of extreme importance even in the easy days of peace without a cloud on the horizon, now becomes the greatest concern of the nation. Health means strength and we advocate that every real American resolve immediately to do his part in building physical fitness and in getting corrected any remediable physical defects. While the strength of each individual, alone, may not be called upon to bear the burden of defense activities, increasing physical fitness to the fullest extent will help to strengthen the structure of the whole community and of the nation. If everyone hasn't had a complete physical examination by his physician lately, now is a good time to get one, not forgetting the immunizations. Surgeon General Parran reminds us that "The people's physical fitness, their freedom from preventable disease, their morale or mental stamina, will determine almost entirely the effectiveness of all other defense efforts."

We know from long experience that war begets disease, and today public health and medical authorities are busying themselves with the many disease problems of past emergencies and are developing programs for reducing preventable illnesses and disabilities. We learned much in the past World War which will help us to cope with the present emergency more efficiently—in fact, ironic as it may seem, tremendous impetus was given both medical and public health advances during this previous war which tend to offset, or compensate in some measure for the great loss of life and destruction of property. Perhaps this bears out what the illustrious Dr. Charles Mayo once said: "When the institutions, the freedom, the wealth, the health and the very lives of a people are jeopardized by destructive forces from without, the primal instinct of self preservation becomes a spur to endeavor and accomplishment"—and war, tragic as it is, seems to leave some good in its value.

At any rate, we are reminded that the 1914-1918 War introduced a new era in preventive medicine, public health and sanitation[1] and many of our most effective public health procedures of today evolved from this period. For instance, trench fever, which had made great inroads upon the efficiency of the British Expeditionary Force was brought under control, thanks to improved sanitary knowledge which makes it possible to inhibit its development and prevent its spread. The war demonstrated beyond all doubt the efficacy of typhoid vaccine and tetanus antitoxin as protection against these disabling diseases. Botulism was discovered to be caused not only by contaminated meats but by improperly canned vegetables which had become infected. There was acquired increased knowledge regarding the dangers of overcrowding and the importance of isolating cases and segregating contacts exposed to meningitis, influenza, and other infectious diseases.

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*Presented before the South Mississippi Medical Society, Hattiesburg, Mississippi, June 12, 1941.

Outstanding among the contributions to preventive medicine was the Army's candid system of venereal disease control, which helped to inhibit the spread of these disabling afflictions among our troops. Today, civilian populations are approaching the problem in somewhat the same manner. People, at long last, have awakened to the fact that syphilis is a disease problem, and much of the fear, shame and vice-consciousness which has been associated with it is slowly being eliminated. Enlightened public opinion now encourages educational and other practical control measures.

No small development arising out of the past war is the added interest in periodic physical examinations. Unusual interest in child welfare has also come to the fore, prompted by the realization that many of the numerous physical defects disclosed by military examining boards might have been prevented by intelligent care and training during the early years of life. These and many other advances were realized, making it possible for both medicine and public health to achieve new heights in improving the health, comfort and safety of civilian life in the years which followed.

Notwithstanding all these accomplishments, the rate of rejections of young men for military service remains high. Diagnostic technics are of course more accurate than during the previous war, enabling more physical defects to be detected. Nevertheless, the whole deficiency points to the fact that the knowledge which has been gained for promoting health and protecting against disease has not been wholly applied. While public health has achieved amazing results in controlling communicable diseases and in lengthening the span of life, it unfortunately cannot protect an individual against many preventable conditions unless he gives full coöperation. In our venereal disease control program we have an example of this, and there are numbers of other instances. In other words, "We can make certain that the milk delivered to an individual is Grade A, but we cannot make certain that he who drinks it has a Grade A mouth."

Never before in history have we been possessed of as much applicable knowledge for practicing *personal* preventive medicine and for achieving optimal well-being as we have today. Yet. we know that the full benefits of this knowledge will not be reaped until certain barriers are removed. Among these barriers are ignorance, fear, indifference, lack of information and the consequent lack of understanding. In a critical review covering the last hundred years of medical progress, Dr. Iago Galdston[2] puts his finger on much of our problem when he states forthrightly that "most of the adult men and women in our society are more interested in other matters than they are in health. Their understanding of health is based chiefly on its *negations*: disease, weakness, inefficiency — the conquest of illness rather than the promotion of health . . . For the most part, they are merely interested in being free of such diseases as interfere with their daily pursuits . . . Preventive medicine requires the organization of one's activities and the deliberate cultivation of practices having for their definite objective the attainment of the highest possible in physical and functional competence. These objectives have little appeal for the average man of today (Dr. Galdston points out). Not health but power is the common goal. Health is prized only insofar as it serves in the struggle for power. Health is promptly and thoughtlessly sacrificed if it is believed that power may thereby be procured . . . Personal preventive medicine will not be widely practiced until health and well-being are more fully prized than they generally are today. To improve this, there must be a radical alteration of our current scale of values, and profound and revolutionary social reform."

We have heard a great deal lately on the subject of adequate medical service and the necessity of making it more widely available to all groups. Yet, as desirable as this would be, it goes without saying that no matter how perfect the plan might be, there will always be *inadequate* medical care for the ignorant, the careless, the neglectful, and the many fanatical devotees of medical cults. We readily admit that striking inequalities exist in certain areas and among low-income groups with regard to the amount, quality and availability of needed medical care; however, I do not believe we should all sit down and hold our hands, waiting for someone to work out a solution to such health problems. We may be able to do many things to *prevent* the very diseases and conditions which impose these problems. When one stops to consider the millions of dollars spent each year for useless patent medicines and for worthless services of individuals masquerading as medical magicians, the costs of a program of health conservation seem small indeed. The proportion of deaths which are preventable is not known, but there is no doubt that many deaths and much subsequent ill health could be prevented by practicing good personal hygiene, and by early diagnosis and prompt treatment of conditions and diseases which, without such treatment, tend to become serious or chronic.

It is being proved daily that a wider application of the newer knowledge regarding *nutrition* is no less important in many instances than certain medical attention and can be the means of preventing much disabling disease. Even families of very low income in Mississippi usually have some place where they can develop a garden and have almost all of the foods necessary for a well-balanced diet. Education is one of the first essentials in converting our great agricultural resources into a powerful ally in the fight against disease. People often get so accustomed to associating illness with medicine and drugs that they lose sight of the possibilities for health improvement through any other medium. However, we have come to realize that many other factors must be considered—proper housing, opportunity for healthful recreation, physical and health education, all have an essential place in the program.

Public health has had a dramatic history and has contributed much to the comfort, safety, and longevity of all of us. However, as we survey the road ahead of us, there loom many unsolved problems—cancer, pneumonia, diabetes, heart disease, virus infections, kidney disease, venereal diseases, and many others. In Mississippi, where one-half of the population is colored, we recognize that any further program for lowering mortality rates must afford the Negro greater health protection. The fact is inescapable that one cannot remain a well person in a society of sick men. The average span of life in Mississippi among the white people is 61.6 years; among the colored it is only 50 years. Usually about one and one-half times more Negroes die each year in the state than do white people. Contributing to this, of course, are greater poverty, ignorance, and lack of health education. Although we have reduced the incidence of disease considerably, tuberculosis and the venereal diseases continue to be two of the leading foes to the health of the colored population. Tuberculosis takes a toll of nearly 800 in the state each year; syphilis strikes practically 1 in every 5. Malaria, too, affects thousands, lowering enormously their resistance to other diseases. Malnutrition continues a paradox in a land of plenty, undermining health and leaving in its wake undernourished bodies, which will face almost certain disaster when further disease strikes. Lack of sanitation in many homes leaves wide open the loopholes for such filth-borne diseases as typhoid fever, dysentery, and many others. The principal causes of death in which the colored people of the state greatly exceed the white people are: tuberculosis, the venereal diseases, typhoid fever and the dysenteries, diarrhea and enteritis, pellagra, pneumonia, diseases of pregnancy and the puerperal state, and homicides.

In building our health defenses, we cannot afford to overlook the necessity of a much more positive program which will include definite services to those 40 years of age and over. If a person survives all other hazards of existence—diseases of childhood, communicable diseases, etc.,—old age is inevitable; therefore, public health attention to the disease problems of old age is very timely. Recognizing this fact, there has been established a special unit on gerontology in the National Institute of Health to study these problems.

Some of the most effective health work is achieved through the full-time county health department. It might well be considered a major factor in the community's health defenses. During the past five years the number of full-time units in Mississippi has been doubled. There are now 56 counties organized and serving 75.2 per cent of the state's population. This steady growth in health services has been noticeably marked by greater enlistment of citizen participation, advancement of standards for personnel and services, and general enlargement of programs. Working hand in hand with the medical profession, the following accomplishments were realized last year through health departments:

469,963 treatments were administered for venereal diseases
5,276 individuals received x-ray examination for tuberculosis
137,724 individuals were immunized against typhoid fever
47,690 individuals were immunized against smallpox
32,855 individuals were immunized against diphtheria
428,664 linear feet of minor drainage were completed
17,166 new privies were installed
8,497 maternity cases were given health supervision
42,787 school children were given physical examination
154,083 laboratory examinations were made for syphilis.

The full-time county health department conducts continuingly a program of health education, which means the dissemination of information on disease prevention to everyone in the community. The underlying principle in carrying on an effective health program is to develop in the individual citizen a sense of personal responsibility both for the care and protection of his own physical welfare as well as for the health of his family; and further, to develop in him a sacred regard for the rights of others in preventing the transmission of communicable diseases.

For a reasonable expenditure of effort and more widespread education in matters of health, it is possible for individuals collectively to add enormously to the strength of the nation at this uneasy hour. Consider this a challenge, if you will, and bear in mind that your physical fitness, my physical fitness, and the physical fitness of our fellow Americans may determine the outcome of this present crisis, and in addition have a far-reaching influence on the course of events of the future.

Upon the shoulders of the medical and public health professions rests much of the responsibility for maintaining and keeping strong the home front. Major shifts in population have introduced emergency problems of housing, of sanitation, of hospital, nursing and medical care. Increased measures must be put into effect to prevent epidemics. The State Board of Health provides free laboratory diagnostic service to all state physicians and also coöperates by supplying drugs and biologicals for treating and controlling many diseases. The whole job is one of teamwork and means sharing of responsibility for the common good. The long list of medical problems arising from or accentuated by the emergency is pointed out by Dr. Michael M. Davis[4] as follows:

1. Service to enlisted men, to trainees, to draftees physically disqualified but with remediable defects;
2. Selection and mobilization of physicians, dentists, nurses, and public health personnel;
3. Public health control of areas of mobilization;
4. Medical personnel, facilities and services for defense workers, especially in areas where population has been largely increased;
5. Improvement of urban and rural services needed to maintain security and efficiency;
6. Nutrition and its ramifications affecting health, agriculture, national and international economics;
7. Research problems ranging into aviation and industry as well as within clinical medicine and epidemiology.

"If the American people and the professions deal adequately with these and other health problems connected with defense, they may proceed as far as they have the wisdom to see and the courage to go," Dr. Davis pointed out.

In the past, syphilis and gonorrhea have proved such wasters of manpower and efficiency both in the armed forces and in civilian populations, that we are organizing now effectively to control the problem in the present emergency. In Mississippi provisions are being worked out to treat all Selective Service registrants found to have syphilis, thereby marking another step in the plan to make the nation strong by building physical fitness. The program is a coöperative one, involving the assistance of the Selective Service System, the United States Public Health Service, Medical Corps of the United States Army, the state and local health departments, and private physicians.

Those able to pay for treatment should be treated by a private physician, but those unable to pay should be referred to a public clinic. It is the responsibility of the health departments and private physicians to see to it that the selectees having syphilis are provided with treatment, regardless of economic status.

Approximately 600 have already been placed under treatment in the clinics of the state, but there is no record available as to the number receiving treatment by private physicians. The importance of immediate treatment of these cases cannot be overestimated. Checking the disease now may be the means of making these individuals fit for military service later.

Already, the State Board of Health and county health departments in Mississippi have assumed definite responsibilities in the National Defense Program. One would have to visit our central offices to appreciate fully the enormous volume of work which has been created as a result of new needs. Some departments have been more heavily taxed than others and the working day of many has been lengthened, but you will hear no complaints. Employees have borne up loyally under the extra load and I believe they will tell you that they are glad for the contributions they can make to our National Defense.

There is little question, I think, but that everybody—every true American at least—is eager and willing to do all he or she can in the interest of our national welfare. The job is truly a big one, so let us not be unmindful of the added importance of good health in these times and do our utmost to build physical fitness. For fitness is strength!

A colleague, Dr. Thurman B. Rice,[3] of Indiana, recently advanced the following thought:

"... Sometimes I wonder if the ramparts we watch
Have been too comfortable and too secure.
Maybe we have taken them for granted,
And have little realized their cost and value.
But when—as God forbid—these ramparts are lost,
We will gladly give our blood and substance
To regain what once we had, and held in light regard."

The whole world picture looks dark at this time, but while giving of our best, let us not grow too discouraged about the future. Some of the greatest contributions which have been made to civilization came during periods of turmoil. Of these things we are sure: "We shall not cease in our efforts to prepare a better world—with more freedom, justice and happiness; a world in which men will pull together instead of killing each other; a world in which man will be liberated from the primitive and elementary bonds of poverty, ignorance and disease. Such a goal may not be in immediate sight, but it is worth working for and giving of the best of our efforts daily to bring it ultimately into being."

REFERENCES

1. Darnall, J. R.: Contributions of the World War to the Advancement of Medicine, J. A. M. A., 115: 1443-1451, 1940.
2. Galdston, I.: Progress in Medicine; a Critical Review of the Last Hundred Years, New York, Knopf, 1940.
3. Rice, Thurman B.: The Ramparts We Watch. Monthly Bull., Ind. State Bd. Health, v. 54:27, 1941.
4. Davis, Michael M.: America Organizes Medicine, New York, Harper, 1941, p. 279.

The Role of the Electrocardiograph in Suspected Heart Disease

DOUGLAS D. BAUGH, M.D., F.A.C.P.
COLUMBUS, MISS.

THE PROPER place of the electrocardiograph may be described at the outset as the same as that of any other reliable laboratory aid. While it is an instrument of extreme precision, it does not supplant, but complements other time tried methods of examination.

The probable order of importance of the methods of cardiac examination are: 1. history 2. physical examination 3. electrocardiograph 4. x-ray examination 5. other special laboratory tests, such as the Wassermann test, the basal metabolism, the blood picture and the sedimentation index. I may say, parenthetically, that the most important of these methods. the history, is also the one least fully utilized.

Until recent years the use of the electrocardiograph was somewhat restricted, but now more are being made available to the profession everywhere. Since it is obviously impractical and even unnecessary to do an electrocardiograph on every patient suspected of having cardiac disease, the question arises as to which cases should have electrocardiographic study. This discussion is designed to be of some help in the matter by pointing out some of the advantages and limitations of electrocardiographic examination.

The electrocardiogram is not the criterion of whether or not cardiac disease is present. Of course, the electrocardiograph is of great potential value in any suspected cardiac disease. Its chief uses, however, are in 1. defects in conduction 2. defects in rhythm 3. defects in the coronary tree.

Heart block, or defects in conduction along the pathway of the excitation wave, may occur at any point from the origin in the sino-auricular node to the terminal fibers of the bundle of His in the heart muscle. All degrees of heart block can better be determined by electrocardiography than by clinical methods. The cause is most often due to arteriosclerosis, myocardial infarction, acute infections (usually rheumatic fever), lues, and drugs, particularly digitalis.

In first degree heart block, the defect is usually in the bundle of His or its branches and is of such a low grade as to cause mere delay in conduction time, as from myocarditis and arteriosclerosis. It is shown on the tracing as a prolongation of the P-R interval beyond .20 of a second, and can be measured accurately.

This is of particular value when atypical rheumatic fever is suspected, in which case a prolonged conduction time or an elevation of the R-T segment is usually found in the presence of the accompanying myocarditis. Complete blockage of conduction in the bundle of His is shown on the electrocardiogram by a bradycardia and the auricles and ventricles beating independently of each other. All degrees between are found. If the lesion is in one of the branches of the bundle of His, a typical electrocardiographic picture is shown with widening of the base of the R spike.

An electrocardiogram is invaluable in the various cardiac arrythmias, including extra systoles, auricular and ventricular fibrillation, paroxysmal tachycardia, auricular and ventricular flutter as the most important examples. Some of the arrythmias, such as sinus arrythmia, extra systoles, and paroxysmal tachycardia are usually benign, but others may have a grave significance.

It is often impossible to distinguish, for example, frequent extra systoles and auricular fibrillation with the stethoscope, but the difference is unmistakably shown on the electrocardiographic tracing. Most of the arrythmias are associated with a rapid heart rate, and in the presence of a tachycardia that is not readily accounted for, a tracing should be made immediately.

One of the most valuable uses of the electrocardiograph is in the study of coronary disease. The symptoms of coronary disease, particularly coronary occlusion, are often vague, or they are confused with the symptoms of abdominal disease. Dr. James B. Herrick, who first differentiated this disease from angina pectoris, has listed thirty-two conditions with which occlusion may be confused.

Angina pectoris is often difficult to differentiate from occlusion except by the aid of the electrocardiogram, which will in most cases identify occlusion. There is no typical electrocardiographic picture in angina; a tracing is of positive value only when occlusion is not shown. Let me emphasize that the diagnosis of angina is made from the history. Levin says, "There is no other diagnostic characteristic of angina apart from the history." Recently, we are coming to realize that pathologically the difference between angina and occlusion is chiefly that of degree.

The T waves and the S-T segments are the chief parts of the complex affected in infarction following occlusion. At first, the S-T segment may show only slight change, but after a few days, during which time the infarcted area has time to degenerate, the T waves in leads one, two, or both, usually become inverted, along with other minor changes. In suspected occlusion, a series of two or three tracings at intervals of a few days for confirmation should, if practical, be made, particularly if the picture is not at first typical.

On the first day of an attack the electrocardiogram may be relatively negative. A degree of myocardial anoxemia or degeneration is necessary for producing the electrocardiograph changes seen in myocardial infarction.

In conclusion I would like to mention an invaluable accessory use of the electrocardiograph. In cases of cardiac neurosis, where no organic heart disease can be demonstrated, an electrocardiogram for confirmation is often necessary in order to convince the patient and send him away reassured.

BIBLIOGRAPHY

1. Maher, C. C.: Electrocardiography, William Wood & Company, Baltimore, 1937.
2. Reid, William D.: Manual of Cardiology, Oxford Medical Publishers, 1940.
3. Levin, Samual A.: The Medical Clinics of North America, Sept. 1940, pp. 1325-1345, Philadelphia, W. B. Saunders Company.
4. Stern, Neuton S.: Clinical Diagnosis, The Macmillan Company, 1933, New York.
5. White, Paul D.: Lectures to New Orleans Graduate Medical Society, March 3 and 4, 1941.
6. Blumgart, Herrman; Schlesinger, Monroe J.; Zoll, Paul M.: Angina Pectoris, Coronary Failure and Acute Myocardial Infarction, J. A. M. A., 116: January 11, 1941, pp. 91-96.

Introduction of Dr. Matas*

W. A. EVANS, M.D.
ABERDEEN, MISS.

Ladies and Gentlemen:

WHEN your president, Dr. Anderson, began thinking and planning for this evening's program his impulse was to get Dr. Matas' consent to give the annual address. Dr. Matas had been his teacher and almost his life-long friend. As editor of THE MISSISSIPPI DOCTOR, he had given deserving publicity to Dr. Matas' address, *The Soul of the Surgeon.* He had read and been deeply moved by Dr. Matas' address at Magnolia. All things considered, no other physician in America would fit this occasion so well as Dr. Matas. But that eminent surgeon he knew to be busily engaged with other activities. Besides varied demands on his time, many requests come to him for addresses similar to this one. How to get him to agree to give this one was the problem. No ordinary approach would do. He decided to go to New Orleans. This he did. He called at the office on Prytania Street. The attendant who had cared for Dr. Matas for so many years was not encouraging.

The doctor was at his home on St. Charles Avenue. Yes, his health was good but he was always overworked. The patients? No, she knew how to protect him from patients. What was worrying her—what was killing the doctor—was all that writing. He wrote and wrote and wrote. Nobody could stop him.

There was so much to do, she said, and no one can make him stop and rest.

Dr. Anderson was almost dissuaded. But soon he got his courage back and went over to the home on St. Charles. He was ushered into the parlor and told the doctor would come in shortly. All around the parlor were works of art, busts, sculpture, paintings, pianos and stacks of music. Sliding doors half apart showed a back parlor that told another story. Here were stacks of books reaching from the floor to the ceiling, printed books and other books in manuscript form. One pile consisted of manuscript books telling the history of disease and doctors in Louisiana. It was on this manuscript that Dr. Matas was spending most of the time the old attendant begrudged. Presently Dr. Matas was heard pattering down the hall with quick short steps. He was very gracious and cordial but he complained of being very busy and not having the time to do so many things he wanted to do.

Dr. Anderson saw that he had only one channel of approach—the appeal of old friends to an old friend. He said in substance, "Dr. Matas, we do not want you to make a scientific address. We do not ask you to tell us of some new surgical procedure. The fact is, we do not ask you to write any speech to make to us. You are our old friend. We have been friends of a life time. The doctors of Mississippi have always admired you. They have always stood by you. They have always regarded you as their friend. We want you to come and talk to us as informally as a friend to friends."

In Beauvoir House there is a boat which Capt. Leathers of the steamer NATCHEZ had built for and had given to Winnie Davis. Jefferson Davis and his family lived much of his life at Brierfield on the Mississippi River. They used river boats almost exclusively. You men who live in river towns know the friendly relations between captains of river boats and the families who used those boats. Jefferson Davis and Capt. Leathers were intimate friends. Captain Leathers had taken care of Winnie Davis as a child. Years passed and Capt. Leathers heard that his little girl, Winnie Davis, had grown into a beautiful woman and that suitors hung about.

He had a boat built as a present for her. He lettered on the bow the word BARBASHEELE. That is a choice Choctaw word in which is rolled together the idea of friend—companion—goodfellow. There is a wealth of meaning in the words, "She's my barbasheele."

Ladies and gentlemen of the Mississippi Medical Association, I present to you our barbasheele, Rudolph Matas.

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*Spoken on President's Night, May 13, 1941, in presenting Dr. Rudolph Matas, New Orleans, La., who delivered the annual oration before the seventy-fourth session of the Mississippi State Medical Association.

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THE PRACTITIONER AND DEFENSE

At this time there is something for every person to do. It would seem that doctors and industrial workers are in the greatest demand. The Red Cross is calling for a thousand doctors which have not been supplied for England. Public health in our state especially is intensifying its service to help meet the urgent needs of the people and to increase the total health strength. The army is steadily increasing its ranks from the recruiting men of the profession fresh from their internships. Many small towns and rural communities are all but begging for doctors. The larger centers with the bigger economic opportunities and shorter hours have the young men marked before the day of graduation. Nurses and technicians are in such demand that the general practitioner in surgery and medicine is feeling the loss of their assistance.

The total assets in health are not increased by medicine alone although the value of new discoveries even in the field of chemicals is marvelous. Personal study of the individual in all of his relations to life are most important. Medical advice and encouragement are imperative for effective results. The call for all-out activity on the part of the medical profession for emergency health service is strong. The time for the demonstration of resourcefulness is at hand. There is much that the profession can do to increase its volume of medical service. Trained practical nurses can help, plus augmented office room and supplies which would permit many patients to come to the doctor instead of his going to them. These improvements would provide better service for less money, at the same time leaving more profit to the doctor. Some of the older practitioners who have been coasting along may need to go on full time with renewed interest. Any doctor who has burning within his breast the true medical spirit will not mind this. Coöperation between doctors can do much to conserve their energies and make their medical service go further. CIO hours, that so many specialists are so prone to adhere to, may have to be abandoned. The patriotic call to medical service is quite as strong out on the fronts of medicine as it is on the firing lines of defense. The call is for more power for the nation through increased health assets.

Six months—the first half—of 1941 have passed by. Most of the more important medical meetings have been held. Those members who attended these meetings are to be congratulated. They not only showed themselves eager to keep abreast of current medical progress, but they manifested a willingness to do their share of the work that must be done if organized medicine, as now constituted, is to be perpetuated and preserved for the years that lie out before us. Social, political and economic structures and orders are being threatened and possibly are doomed. Let us hope that the medical structure, as we know it, may not be destroyed in the present world crisis. Let us, during the remaining six months of the year, take careful inventory—take stock as it were—let us read the papers that were read before these associational bodies and ponder them well. In so doing we shall find much that is questionable. Medicine, in its progress, has traveled far. Sometimes this progress has been slow, indeed. At other times it has been marvelously fast. During my years it has moved so swiftly that it has been difficult or impossible for any one man to go all the way. Tuberculosis, malaria, diphtheria, yellow fever and diabetes have been halted. In addition the entire field of internal secretory glands has been surveyed. The all important field of biochemistry has been opened —which field, of course, includes the "vitaminic" postulations. I am made to wonder if it may not be possible that the mad speed at which we are moving has not led us to neglect and forget certain fundamental facts and principles that have been established in the long, long, ago? It is, undoubtedly, true that many of the principles and practices of the past were based on empiricism, but they were proved to be valuable and trustworthy. I am, also, made to wonder and to doubt if many, very many, of the theories and practices of today will stand the test of time as did the old fashioned teaching and practise of yesteryears. I once heard an educated and brilliant doctor say that he had rather base his practise on theories that are *wrong* than to be *right* with no explainable theory for his practise. It is fine, very fine, to have theories and to test them. In fact it has so long been my practise to try to explain my procedures along theoretical lines, that I have been classed as a "theorist." But when I find a *theory* will not work, I am all too willing to abandon it. I fear that we, in our haste and eagerness to keep in the van, not only lose touch with much that is tried and proven, but accept much that will lead us into confusion and regret. It is very evident that many of our number depend upon the detail men who represent commercial interests to direct our thought and practise. Of course we are under obligations to these manufacturing chemists and dispensers who make it possible for us to follow and test the theories that are being advanced. But is it not possible that much of the literature that goes with the *free* samples that are left with us is not propaganda that has been "bought with a price?" Is it perfectly fair to our patients to try these copyrighted drugs out at such exhorbitant cost? Might it not be well for us to remember the drugs that served us so well in the past? Who of us ever thinks to administer the old time remedies such as calomel, rhubarb, Dovers powder, castor oil, bromide of potassium, santonin, Tr. of iron and some other friends of long ago? I am wondering if the increased cost of medicine of which we hear so much, may not be due to the high cost of drugs that may be of doubtful service? Again I wonder if enough thought is given to the place that psychotherapy should occupy in the treatment of the sick? I wonder if the personal relations that formerly existed between doctor and patient did not play a very important part in the cure of the sick? Again I wonder if the psychological effect of the parade of certain "instruments of precision" in our diagnostic procedures, does not tend to harm rather than benefit many sick people? Again I wonder if we are not frequently misled in our diagnoses by the findings when such instruments of precision are relied on too far? Again I wonder if too many of us do not fail to develop diagnostic acumen by depending too largely on laboratory findings? To sum up the entire matter, I wonder if it might not be well to place a question mark after every innovation that is proposed? I, also, wonder if we should not question our own conclusions? However I trust that no one who may read these lines will class me as an obstructionist; for my slogan is, and always has been, "Look upward and press forward." Some one has said, "Be sure you are *right, then* go ahead."

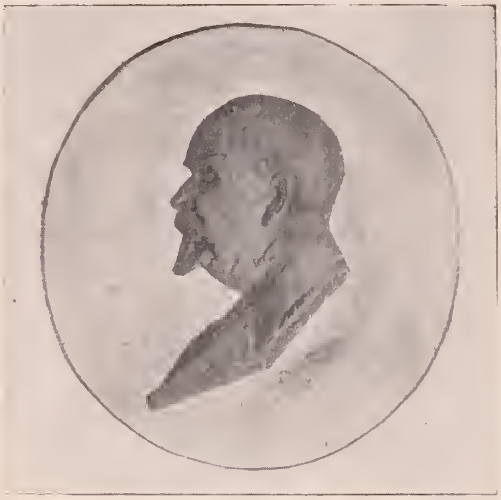
—G. S. B.

News and Comments

UNPRECEDENTED HONORS GIVEN DEAN OF MEDICAL WORLD

Before a distinguished gathering in Touro Infirmary, New Orleans, of business, medical and philanthropic leaders, tribute was paid the internationally known surgeon, Dr. Rudolph Matas, a few days ago. A portrait medallion was dedicated to remain in the halls of the hospital as a tribute to his services there. Dr. Isidore Cohn, who succeeded Dr. Matas in 1935 as chief of surgery of the institution, unveiled the plaque.

The honor was unprecedented. Commemorative bronze plaques frequently have been placed in institutions after the death of those who have served them long, faithfully and with distinction. But June 24, 1941, Dr. Matas became the first known living surgeon to be thus honored, when the board of managers of Touro Infirmary, New Orleans, unveiled his portrait in bas-relief. It is to perpetuate his memory in the board room of Touro Infirmary, the hospital he served for more than 30 years as chief of surgery, and of which he will be emeritus chief of surgery as long as he lives.



—*(Staff pencil sketch of medallion)*

The upper part of the heavy bronze plaque is a circular disc bearing the profile portrait of Dr. Matas in bas-relief. The lower part of the plaque is rectangular, bearing in raised letters this inscription:

"Rudolph Matas. 1860——. Chief Surgeon, 1907-1935. Emeritus Chief Surgeon, 1935——. His Example Will Remain a Tradition and a Spiritual Legacy to Immortalize His Fame. Dedicated by the Board of Managers of Touro Infirmary, 1941."

Also, as an emblem of unselfish civic service, given annually since 1901 by The Times-Picayune Publishing Company, to the New Orleans citizen selected for outstanding achievement redounding to the benefit of New Orleans and the people of New Orleans, a silver loving cup was awarded to Dr. Matas. His long years of notable research, inventions, discoveries and teachings in the field of medicine and surgery, and his more than half-century of limitless charity practice in which all the resources of his knowledge, skill and experience have been given freely in countless cases from which he never expected or received payment for his services, were cited.

Dr. Matas has been decorated by several foreign governments and many universities, knighted in Spain, and proclaimed at home and abroad. And though he has seen the lilies bloom four score times, yet his life is full of enthusiasm, there is youth in his soul and morning in his eyes. He labors for the good he can do and for love of high and useful achievement. Such records as Dr. Matas will leave behind when he comes to the sunset of life are the things that have made the world better and life safer and more abundant. To have known this great man and imbibed from his boundless fountain of wisdom will always comprise the sweet and happy and beneficient recollections of every student who has sat at his feet.

Dr. Cleveland Davis died at his home in Itta Bena, May 5, 1941, following a ten days' illness. Funeral services were held at the home, followed by interment, with military honors, in the Itta Bena cemetery. Dr. Davis was born at Choccolocco, Ala., graduated from Atlanta College of Physicians and Surgeons in 1906 and had practiced medicine in Itta Bena about 35 years. He was a World War veteran, a member of the Presbyterian Church and a Mason. He is survived by his wife, a daughter and three sons.

Dr. Roland H. Cranford, 61, physician in Laurel more than 20 years, died at his home May 21, after many months' illness with heart trouble. Dr. Cranford was born in Seminary, received his medical education at Memphis Hospital Medical College, graduating there in 1906. He moved to Laurel in 1918 to become the first superintendent of the South Mississippi Charity Hospital. He owned and operated the Laurel General Hospital for several years. He served as president of the South Mississippi Medical Society in 1934. He leaves his wife and four children, two brothers and two sisters.

Dr. George Mosley Shaw died at his home in Robinsonville, Miss., April 26, 1941. Dr.

Shaw was one of the most outstanding and best beloved citizens of Tunica County and was a faithful worker in the Methodist church. He was born near Horn Lake, Miss., the son of Dr. Benjamin Shaw. He was graduated from the old Memphis College in 1892 and shortly afterward moved from Whitehaven, Tenn., to Robinsonville, where he spent all of his 48 years of practice. Dr. Shaw is survived by his wife, Mrs. Julia Jones Shaw, one daughter, two sisters, and three grandchildren. Funeral services were held at the home with interment in Elmwood Cemetery, Memphis.

The Southern Medical Association will be held at St. Louis, Mo., beginning Monday afternoon, Tuesday, Wednesday and Thursday, November 10 to 13. The Association will open at noon on Monday, the registration beginning at that time, the scientific program beginning at 2:00 P.M. and continuing through Tuesday, Wednesday and Thursday, all Association activities being concluded in the late afternoon of Thursday.

Dr. Jacob Moon Anderson died at his home in Sardis, Miss., July 8, 1941, following a heart attack. He was 72 years of age and had practiced at Sardis since 1908. He completed his medical course at the old Memphis Medical College in 1898, practiced in Itta Bena two years before moving to Sardis. At the time of his death he was town health officer; served as president of the school board from 1918 to 1926; member of the Methodist church and a Mason. He is survived by one son, J. M. Anderson, Jr., of Sardis, two sisters and four brothers.

SULFAGUANIDINE—LEDERLE

Released for Commercial Distribution June 2

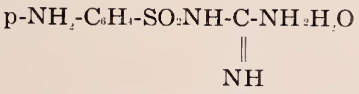
Trade Name: Sulfaguanidine

Classification: Chemotherapeutic

Mfg. Name: Lederle Laboratories, Inc.

Chemical Name Sulfanilyl guanidine monohydrate

Formula:



$$\text{p-NH}_2\text{-C}_6\text{H}_4\text{-SO}_2\text{NH-}\underset{\underset{\text{NH}}{\|}}{\text{C}}\text{-NH}_2\text{H}_2\text{O}$$

Description: White, odorless, needlelike crystals or crystalline powder. Soluble 10 gm. in 100 cc. boiling water and 0.22 gm. in 100 cc. at 37.5°C. 5% soluble in boiling water, 95% alcohol and 1.5% in acetone. Difficulty soluble in other acids and insoluble in benzine, ether and chloroform.

Action: Inhibits the growth of micro-organisms, particularly on gram-negative bacteria. Sulfaguanidine tends to lower the gram-negative, without exerting much effect on the gram-positive bacterial count in the colon.

Uses: Pre- and postoperatively in surgical procedures, particularly in colon resections, etc. Also bacillary dysentery.

How Supplied: 0.5 gm. tablets—packaged of 50, 100 and 1000; ¼ and 1 lb. powder, 12-3.5 gm. powders.

Administration: Orally—Adults and Children—Acute Bacillary Dysentery: Initial dose—0.10 gm. per kg. body weight, followed by maintenance dose of 0.05 gm. per kg. every 4 hours night and day until the number of stools per day is 5 or less; then 0.05 gm. per kg. every 8 hours for at least 3 days.

Orally—Surgery—Adults and Children—0.05 gm. per kg. body weight, every 8 hours night and day for 5-7 days preoperatively. Postoperatively, same dosage should be commenced soon as possible to insure clean wound healing.

Caution: Drug should not be continued for more than 14 days. Same precautions as with other sulfonamides should be pursued (Blood concentration, urine tests, etc).

DR. JOHN C. CULLEY

OXFORD, MISS.

President of the Mississippi State Hospital Association

Dr. Culley is a native of Madison Station, Mississippi. He arrived in that month that brings so many celebrities, February, 1886. He spent his boyhood days in Jackson, and received his B.A. degree from Southwestern University. He graduated in medicine from Vanderbilt School of Medicine and took his internship in the City Hospital of Chattanooga. He was one of the five assistant directors of Public Health and Sanitation under Dr. W. S. Leathers under whom he estalished the first free dispensary for the treatment of hookworm disease in the United States. He was a captain in the medical corps of the Mississippi National Guard in 1911, serving under Dr. Major John Dicks for three months during a strike at McComb.

Dr. Culley moved to Oxford in 1912. He was county health officer of Lafayette County in 1917-18 and served on the local draft board during the World War. He was commissioned captain in the STC at the University of Mississippi and was on the University faculty during the World War.

In the Mississippi State Medical Association he has served as vice-president and as councilor. He was the first president-elect of the Mississippi State Medical Association, serving in 1930 before being elected to the presidency the following year. In 1940 he was a vice-president of the Mid-South Postgraduate Medical Assembly. He is a member of the American College of Surgeons, the Southeastern Surgical Congress; examiner for the Veteran's Bureau, the Civil Service Commission and Civil Aeronautics Authority; member of the committee on Health, Welfare and Consumer Interest under the Defense Program; member of the Medical Advisory Board in Mississippi by appointment from Gov. Johnson. He served as first president of the Oxford Rotary Club.

Dr. Culley is an idealist and he has the practical application to make his dreams come true. He has invested much money in his hospital and has operated one of the best in the state. He knows the hospital business. We believe he will make hospital progress in the state during his administration.

FOR SALE: Portable obstetrical table, only used a few times, blood pressure instrument, two sterilizers, books, and other office equipment.—Mrs. C. B. McCown, Aberdeen, Miss.

LICENSES ISSUED MISSISSIPPI DOCTORS

Permanent licenses to practice medicine in Mississippi were issued by the State Board of Health on June 27, 1941, to the following physicians:

By Examination

Dr. Richard B. Austin, III, Forest; Dr. Willard A. Barnes, Kosciusko; Dr. William R. Bethea, Jr., Jackson; Dr. Julian E. Boggess, Jr., Macon; Dr. Robert T. Bonney, Enterprise; Dr. Francis C. Coleman, Jackson; Dr. Albert S. Easley, Magnolia; Dr. Harvey L. Flowers, Kilmichael; Dr. Neil M. Forbes, Jr., Laurel; Dr. Onyx P. Garner, Pontotoc; Dr. Thomas M. Gore, Houston; Dr. Samuel H. Horton, Jr., Grenada; Dr. William J. Hossley, Jr., Vicksburg; Dr. Winthrope R. Hubler, Birmingham, Ala.; Dr. Claude A. Jackson, Kosciusko; Dr. Warren M. Kirk, Louisville; Dr. A. Walden Klaus, Vicksburg; Dr. Early B. Lokey, Jr., Hattiesburg; Dr. James A. Lauderdale, Jr., Jackson; Dr. John W. Long, Sallis; Dr. James O. Lopez, Bovina; Dr. William E. Lotterhos, Crystal Springs; Dr. William H. Lunceford, Slate Springs; Dr. William David May, Meridian; Dr. Littleton L. McCharen, Toccopola; Dr. Fitten L. McMillin, Yazoo City; Dr. Thomas L. Moore, Jr., McComb; Dr. Frederick C. Rehfeldt, Jackson; Dr. Jack Hamilton Scott, Kosciusko; Dr. Frank M. B. Slater, Jackson: Dr. James B. Smith, Magee; Dr. William A. Smithson, Goodman: Dr. Orville P. Stone, Tremont; Dr. Addison T. Tatum, Hattiesburg; Dr. John W. Watkins, Quitman; Dr. David T. Wilson, Louisville; Dr. Rhea L. Wyatt, Tupelo; Dr. Frank K. Tatum, Tupelo.

By Reciprocity

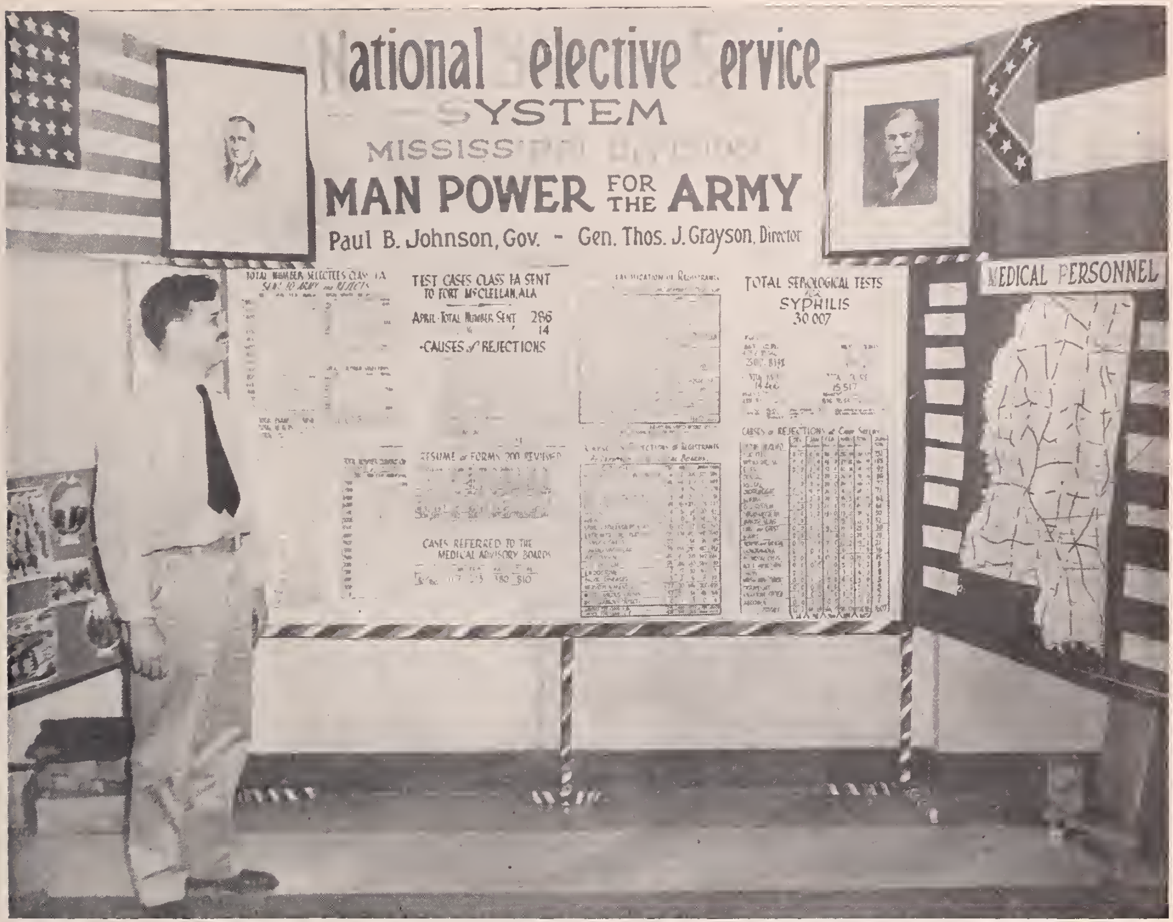
Dr. Alfred L. Adam, Natchez; Dr. Charles A. Bailey, Yazoo City; Dr. William C. Beaver, Jackson; Dr. Lawrence W. Burt, Laurel; Dr. James A. Chustz, Jackson; Dr. Thomas S. Eddleman, Jackson: Dr. John Egger, Jackson; Dr. Eva Linn Meloan, Jackson; Dr. Irving W. Moody, Pascagoula; Dr. Kenneth W. Navin, Cleveland; Dr. George B. Neukom, Batesville; Dr. Walter H. Simmons, Jr., Jackson; Dr. Arthur P. Vandergrift, Hernando; Dr. James F. Van Pelt, Gulfport: Dr. Sidney J. Williams, McComb; Dr. Jack G. Young, Jackson.

Osteopaths

(By Examination)

Dr. Ralph W. Laffey, Kirkville, Mo.; Dr. Charles S. Wyckoff, Meridian.

R. N. Whitfield, M.D.,
Assistant Secretary.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MAN POWER FOR THE ARMY
Paul B. Johnson, Gov. - Gen. Thos. J. Grayson, Director
TEST CASES CLASS 1A SENT TO FORT McCLELLAN, ALA
APRIL-TOTAL NUMBER SENT 296
CAUSES of REJECTIONS
TOTAL SEROLOGICAL TESTS
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30 007
CASES REFERRED TO THE MEDICAL ADVISORY BOARDS
MEDICAL PERSONNEL

Major Lawrence W. Long and the Selective Service Exhibit for Mississippi

(Plea made by Col. Robt. Strong, M.D., for twenty-three years in the Army Medical Reserves, before the opening session of the Mississippi State Medical Association).

Mr. President and Gentlemen of the Mississippi State Medical Society: I am appearing today before you in a different role from any in which I have in the past. I do not know whether we realize down on this beautiful Gulf Coast that we are confronted with a situation quite comparable to that memorable meeting in the spring of 1917. The situation is not exactly parallel because this nation is not at the present time actually in war; on the other hand, one hundred and sixty-five years after the Declaration of Independence we are very definitely confronted with making a decision whether we will continue to enjoy the privileges set down in that declaration by the foresight of those men who signed it, whether we are going to continue to have a government of the people, for the people and by the people, whether we are going to perpetuate the Bill of Rights and the Constitution of the United States. We have an international gangster who has the unparalleled temerity to challenge that right, who has made the same mistake that the wood chopper of Dorne made in 1917.

The medical profession down through the ages has always appreciated and met its obligations. The Hippocratic oath prevails just as much as it did in the days when it was first promoted. I come today to bring to the Mississippi State Medical Society greetings from Gen. McGee, the Surgeon General of the United States Army, as well as from Col. James E. Baylis, who has made a remarkable record in the U. S. Army, and who is now Corps Area Surgeon in what is one of the most important corps areas in the United States. Colonel Jim Baylis, as some of you may know him, was born in Forrest County, in Hattiesburg. He has asked me to talk to you today, and try to persuade you that we are up against a situation wherein all of us must be inconvenienced. We must have medical officers for the army.

It has been a difficult problem and I am going to ask you to look at Major Long's exhibit and read some of the data which he has accumulated, and I think that you will then realize that every one here must be willing to take on a greater task at home in order that some of the young men may be able to be released for military duty. Many of you are making a great amount of sacrifice involving giving your aid for examining the Selective Service men. Remember that sixteen million men registered on October 16, 1940, for military duty. We propose to raise an army by the first of July to reach a million and a quarter. This particular area has been selected as a field of the greatest activity. Some of you may not realize that within this area in our Southern states there will be four hospital beds to one elsewhere in the United States. We need medical officers, young men for them. We have the opportunity and the time to prepare, which was not our fortune in 1917. Some of us are complaisant and believe that things will not happen, but the airplane reduced the expanse of the oceans. Anything is likely to happen. Let us hope that this morning's news* is an evidence of disintegration within Germany; nevertheless, it is going to be our job for the next ten years to keep on building an army and a navy because we are going to have to do what we have always done—win the game in the ninth inning. In any event I leave with you the plea of the Army that you will in your daily walk go around and inculcate into the young men their obligations to accept a year's duty and I ask you to read some of the statistical data that the major has compiled at his booth, and then I think you will realize what an extraordinary problem the medical department of the army has in getting sufficient medical personnel to take care of your sons who have been taken out of their ordinary occupations to be put into a camp to serve one year. Those boys are going to need medical attention. The army is going to give it to them. We want to make it easy and we hope that you will make it easy. Thank you.

VISITORS AT THE STATE MEETING

The following is a list of the guest doctors at the Mississippi State Medical Association which met in Biloxi, May 13 to 15. Others perhaps, who did not register, were present for some of the papers:

Milton Adams, 902 Madison Ave., Memphis, Tenn.; Edgar Burns, 1107 American Bank Bldg., New Orleans, La.; C. M. Calougne, New Orleans, La.; Steve Coley, Memphis, Tenn.; M. Dunn, Hotel Markham, Gulfport; Roland H. Eanes, National Headquarters, Selective Service, Washington, D. C.; Eletta Engum, New Orleans, La.; Col. Thomas L. Ferenbaugh, Camp Shelby; Jack S. Guyton, Johns Hopkins Hospital, Baltimore, Md.; T. W. Hardison, Morrilton, Ark.; M. F. Haralson, Honolulu, Territory of Hawaii; Seale Harris, Sr., Birmingham, Ala.; Raymond D. Henderson, Key Field, Meridian, Miss.; L. C. Horn, 216 N. Waldron, Memphis, Tenn.; O. Rowene Kling, New Orleans, La.; Maxwell E. Lapham, New Orleans, La.; Bruce C. Martin, St. Louis, Mo.; Rudolph Matas, New Orleans, La.; J. E. McGuire, Piggott, Ark.; H. E. Mobley, Morrilton, Ark.; Onnie P. Myers, 1632 Rocky Hollow Rd., Anniston, Ala.; Alton Ochsner, 1430 Tulane, New Orleans, La.; C. L. Qualls, Popular Bluff, Mo.; Whitman Rowland, Memphis, Tenn.; Col. Robert A. Strong, U. S. Army; Curtis H. Tyrone, New Orleans, La.; L. T. Ward, New Orleans, La.; Oscar Wilkinson, 1408 L. St., N. W., Washington, D. C.; George T. Pack, 155 East Seventy-Second St., New York City.

SYDNEY W. JOHNSTON, M.D.

Vicksburg, Miss.

Sydney W. Johnston was born at Clinton, Mississippi, June 8, 1878. His boyhood days were spent in the home of his great-grandfather, Walter Leake, Mississippi's first United States senator and her third governor. He was graduated from Mississippi College at the age of seventeen and the same year entered the medical department of Tulane, where he graduated with the degree of M.D. in 1899. He began the practice of medicine at Clinton and remained there until 1903 when he moved to Vicksburg and formed a partnership with Dr. H. H. Haralson. He joined the Mississippi State Medical Association the year following his graduation and always was a most enthusiastic member.

Two years after moving his residence to Vicksburg, he was made president of the Warren County Medical Society and later served as secretary of that body from 1907 until 1913.

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*Hess' voluntary flight to England.

He was elected councilor of the Mississippi State Medical Association in 1907 and served until 1921. From 1914 until 1921 he was secretary of the Council, and was elected president of the Mississippi State Medical Society 1922-1923. During his term of office the M. S. M. A. made great strides, serving as a model for many other state societies.

He was appointed superintendent of the Mississippi Charity Hospital in 1908 by Governor E. F. Noel and served four years, and was again appointed to the same position in 1924 by Governor Henry L. Whitfield. During his last administration the hospital was approved by the American College of Surgeons and was approved for general internship and residencies in specialties by the American Medical Association, and in 1927 he was made a Fellow of the American College of Surgeons.

During the session of 1910-11 he was professor of clinical surgery in the medical department of the University of Mississippi.

Despite these and many other official recognitions of Dr. Johnston's surgical and medical abilities, he found time for a very large practice, and was noted for his generosity toward the poor. Dr. Johnston was quite interested in agriculture, and contributed much of his energy and time in the development of civic affairs. In 1920 and 1921 he served as president of the Vicksburg Kiwanis Club and in 1921 was also president of the Vicksburg Chamber of Commerce. In 1920-22 he was president of the Warren County Board of Education.

Believing that a good citizen should interest himself in the affairs of government, Dr. Johnston, while never offering himself as a candidate for office, campaigned actively for his friends many times and for those whom he considered of merit. Most of those whom he helped were elected, but even those who were not, were known to be of high character and ability.

Dr. Johnston was active in the Crawford Street Methodist Church and for many years served on the Board of Stewards, being succeeded here by his two sons. He was also a Mason, Shriner and a member of the Elk fraternal order.

In 1900 he was married to Mattie Haralson, daughter of Dr. H. H. Haralson, of Vicksburg, and their marriage was blessed with six children. The medical tradition of the Johnston and Haralson families is now carried on by the two sons, Dr. Hugh H. Johnston, prominent ophthalmologist and otolaryngologist of Vicksburg, and Dr. Walter E. Johnston, a captain in the medical corps of the Army and now chief of orthopedic service at Camp Blanding, Fla.

RESOLUTIONS OF RESPECT

We are all travelers to an unseen home and oftentimes when we least expect, the veiled messenger that men call death speaks our name and we follow the guiding voice. Such a messenger gently and tenderly called the revered name of Sidney W. Johnston, Thursday, May 29, 1941, and told him the day was done, and eventide and resting time had come. Then our beloved friend, confrere, and fellow member of the Issaquena-Sharkey-Warren Counties Medical Society drew the mantle of rest about him and passed to that unbroken sleep "that ends the heart-aches, and the thousand natural shocks, that flesh is heir to."

"There is a voice from the tomb sweeter than song; there is a remembrance of the dead, to which we turn even from the charms of the living. These we would not exchange for the song of pleasure or the burst of revelry." We hold this remembrance of Sidney W. Johnston. His fidelity to medical ethics, his loyalty to organized medicine, his uncompromising stability to principles and approved practices while an officer and member of our society, compel us to listen to that "voice from the tomb" that will ever speak and prompt our memory to produce "images and precious thoughts, that shall not die nor can ever be destroyed."

Those who sleep in death, the gentle end of human sorrow, need not our help, and futile is our praise to add one iota to their name or glory. They, not we, have fixed their immortality. Even though they are benefited none by our spoken plaudits or written eulogies, we do urgently and necessarily need them. Thus, it is with our beloved and esteemed Dr. Sidney Johnston, whose life we cannot augment with laurels or whose character we cannot further glorify, yet we do need him. In these resolutions and in our memory may he abide with us as a faithful and pre-eminently worthy member of our county medical society.

WHEREAS, "That man lives twice who lives the first life well," we believe Dr. Sidney Johnston will live again in our grateful memory as a devoted husband, a noble father, a constant friend, an entertaining companion, an attentive and skilled physician and surgeon, whose influence will continue to yield richly from the deposits he left in the sacred treasury of husband, father, friend and physician; therefore be it

Resolved, That each and every member of the Issaquena-Sharkey-Warren Counties Medical Society bow his head and heart in grateful submission to the passing of our friend and co-worker, Dr. Sidney W. Johnston, while the Omnipotent Hand guides the bark bearing his illustrious soul, that has been tossed upon the waves of pain and pleasure, to the haven of eternal rest; and be it further

Resolved, That we spread upon the minutes of this society a copy of these resolutions and send a copy to his family, to the local press, and to *The Mississippi Doctor,* as a feeble expression of our profound appreciation and pervading sympathy.

F. MICHAEL SMITH,
ALSTON CALLAHAN,
W. K. PURKS,
—Committee on Resolutions.

Book Reviews

The Essentials of Dermatology, by Dr. Norman Tobias, is just off the press. It is published by the J. P. Lippincott Company, Philadelphia, London, and Montreal. The price of the book is $4.75. It contains 497 pages, with 143 pictures and drawings.

Dr. Tobias is senior instructor in dermatology in St. Louis University, assistant dermatologist at Firmin Desloge and St. Mary's Hospitals, and visiting dermatologist St. Louis City Sanitarium and Isolation Hospital.

This is a brief treatise on diseases of the skin especially suited to the medical student and the general practitioner.

The classification of the various types of the dermatoses is based on the clinical, pathologic, and etiologic concepts now generally accepted.

Each disease is discussed in the main from the standpoint of internal medicine.

A most helpful discussion is given throughout the book on the technic of therapy as x-ray, radium, intravenous injections, taking and staining of specimens.

The contents of the book are divided into 32 divisions as basic survey, the erythema group, the eczema group, drug eruptions, et al.

It is a handy atlas of skin diseases for the practitioner, handy in size, in its make-up and in its definite discussion of definite disease.

The Mask of Sanity, by Hervey Cleckley, Professor of Neuropsychiatry, University of Georgia. Published by the C. V. Mosby Company, St. Louis, Missouri. Price, $3.00. In this new book the writer takes up a number of cases and treats them by giving the peculiar characteristics of each person. In most of the cases it had been difficult to diagnose and arrive at a true status of the patient—whether sane or insane. This work will, no doubt, bring to the attention of the medical fraternity many evidences which may be used in working out some of the most difficult cases. A careful review of each case mentioned emphasizes some point which may be used in the study of unusual personalities. Therefore the book will be of special value in the study of many cases in an effort to arrive at a proper conclusion and determination of that particular case. It should be an aid to the practitioner, the forgotten man in general practice, in diagnosing and treating cases that have been very difficult.

The March of Medicine, number five of a series of the New York Academy of Medicine lectures to the laity, is a most interesting book recently off the press. Dr. Edwin T. Hauser assembled the subject matter, which includes the progress of inheritance in mental disease, by Abraham Myerson; chemical warfare against disease, by Perrin H. Long, who gives sulfanilamide liberal space; the history of our knowledge of the blood, by Dr. Paul Reznikoff; the story of viruses, by Dr. Thomas M. Rivers; the ascent from Bedlam, by Dr. Richard H. Hutchings, who traces the development of the treatment of mental sickness; and the romance of bronchoscopy, by Drs. Chevalier Jackson and Dr. Chevalier L. Jackson. Surely there has never been a little book more interesting to read than this one nor one more filled with valuable information to both doctor and laity. Every doctor should have a copy to read and lay on his waiting room table. The price of the book is only two dollars. Columbia University Press, New York. 154 pp.

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COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	W. R. Brumfield, Gloster	Anderson Butler, Liberty	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. A. Slack, Friars Point	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	C. A. Kirk, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	H. L. Scales, Jr., Starkville	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr.,Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	C. E. Catchings, Woodville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat — Alston Callahan, Vicksburg.

Eye—S. S. McNair, Jackson.

Obstetrics and Gynecology—J. W. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

PEDIATRICS

THE ADEQUATE DIAGNOSIS OF INFANTILE CONGENITAL SYPHILIS, Norman R. Ingraham, Jr., Bertram Shaffer, Barbara E. Spence and James H. Gordon, Archives of Dermatology and Syphilology, 43:232 (February) 1941.

A five-year follow-up study of 230 infant offspring of syphilitic mothers born at the Philadelphia General Hospital during the eighteen months from October, 1933, to April, 1935, was made "for the purpose of determining the accuracy of the diagnostic methods employed for the detection of infantile congenital syphilis in the light of recent advances in the knowledge of serologic and roentgenographic interpretation.

"Approximately one-third of the syphilitic group are known to have died, as compared to one-tenth of the non-syphilitic group, but it has been possible to examine again about 70% of the remaining living children after four to five years.

"It is considered significant that no infant was discovered in whom serological tests and the roentgenographic procedures employed had not been able to establish the diagnosis of syphilis in infancy, if it was present.

"The spontaneous remission of clinical symptoms and the disappearance of laboratory evidence of the disease after comparatively little or, at times, no anti-syphilitic treatment may be relatively frequent occurrence among the syphilitic infants who survive the first few months of their disease. Hyperpyrexia from an intercurrent infection may be one of the factors which bring about this apparent 'cure.'

"Recent advances in the knowledge of interpreting the roentgenogram of the long bones in infancy have greatly increased the value of the procedure as a diagnostic aid for congenital syphilis. Misinterpretation of the roentgenogram, which introduced errors as great as twelve per cent five years ago, is becoming uncommon, largely through a better understanding of (1) the occurrence of rather wide variations in normal metaphysical densities, (2) the effect of prepartal treatment of the mother, with heavy metals, in producing opaque shadows in the shafts of the infant bones and (3) the change developing in the malnourished rachitic infant 2 to 3 months of age. Other causes of diagnostic error have been infrequent."

"Significant roentgenographic changes as a result of syphilis in an infant with negative serological reactions of the blood are likewise unusual."

"The use of the roentgenogram as a subsidiary diagnostic aid will be found of greatest value when it is reserved for the study of infants in whom a recent infection of the mother or grossly insufficient amounts of prepartal treatment render the presence of the disease in the offspring most likely.

"The quantitative titered Wassermann test seems to have its greatest value in detecting nonsyphilitic infants with positive serologic reactions at birth. In the present series, 75 per cent of the infants presenting positive serologic reactions during the immediate neonatal period (up to 14 days postnatally) apparently did not have syphilis.

"The detection of the syphilitic infant by the use of the quantitative titered Wassermann test alone is complicated by the facts that, first, the birth of a syphilitic infant in whom the serum regain titer is significantly greater than that of the mother is apparently an infrequent occurrence; second, the syphilitic as well as the nonsyphilitic infant may occasionally exhibit initially a decreasing titer, and, third, a significant rise in the serum reagin content may not occur for from four to eight weeks postnatally.

"The most accurate diagnosis of infantile congenital syphilis would still seem to call for a close coördination in the interpretation of serological reactions of the blood and roentgenographic changes."

COMMENT: This abstract furnishes me an opportunity to make an appeal to all physicians in Mississippi to make blood Wassermanns on every pregnant woman. Rarely ever a day passes in my office that I do not have from one to five babies whose mothers did not have Wassermanns taken before the baby was born, and it is not uncommon for me to find congenital syphilis in a baby whose mother has never had prenatal treatment. Fortunately the Mississippi State Board of Health has a thoroughly qualified laboratory director, Dr. H. C. Ricks, and this laboratory, in my opinion, is considered one of the most up-to-date in the nation. The facilities of the laboratory are offered to the physicians and people of Mississippi absolutely free, and it seems to me that there would be no reason whatever for a physician to fail to take advantage of the benefits derived from the laboratory by taking a blood Wassermann on every prospective mother when first seen by him. It is well known that the most valuable time for treatment of congenital syphilis is to the mother before the baby is born. If every physician in Mississippi would establish this as a rule of practice, and if we can secure an effective pre-marital health examination law, we will be going a long way toward solving the syphilitic problem in our state.

— H. F. G.

PUBLIC HEALTH

PUBLIC HEALTH ASPECTS OF PREMATURE INFANT CARE IN MINNESOTA, Viktor O. Wilson and A. J. Chesley, Journal Lancet, 61:147-151, May, 1941.

Minnesota has been a constant leader among the states in the reduction of total infant mortality but has not attained the same eminent position for deaths among premature infants, the authors point out. Hope for future reduction lies in continuously raising the standards of obstetric practice and through better care of the newborn infant. Analysis of the Minnesota infant mortality during the period 1937-39 shows that 68 per cent of the deaths occurred in the first month of life—in the so-called neonatal period. Among the chief causes of these early deaths are found prematurity, birth injury, congenital malformations, congenital debility and diseases peculiar to early infancy. Of these, prematurity is by far the most prominent, being reported as responsible for 52 per cent.

The incidence of premature birth is closely related to the health of the mother during pregnancy. Among the numerous conditions in the mother recognized as having causal relationship are the toxemias of pregnancy, acute infections, and chronic disease, including syphilis, heart disease, tuberculosis, diabetes, nephritis and pyelitis. Such factors relating to prenatal hygiene as trauma, overwork, heavy lifting and severe emotional disturbances, are also believed to influence prematurity. It is apparent that a few weeks of continued intrauterine life may easily determine the survival of the infant, consequently it is of great importance to postpone birth as long as the condition of the mother will permit. The public health significance of routine prenatal medical care is emphasized.

During recent years methods for care of the premature infant have been developed in large hospitals. These methods have attained high efficiency and reduced mortality at the Minneapolis General Hospital from 65.8 per cent in 1931-1932 to the low level of 13.3 per cent in 1936-37. Universal application of the methods for care of premature infants after birth offers hope for future reduction of infant mortality. Major points stressed are:

1. *Care begins immediately after birth.* Since premature birth may be precipitate and frequently creates an emergency, it is necessary always to be prepared for the care of the infant. The hospital is advised to keep oxygen and a heated incubator available in the delivery room.

2. *Maintenance of normal body temperature.* An incubator conveniently provides the necessary warmth and provision of humidity is regarded as useful in stabilizing the body temperature. Premature babies do not withstand chilling and at birth it is recommended that they be received directly into a warmed sterile covering.

3. *Management of asphyxia and cyanosis.* Oxygen is essential for prevention and treatment of these conditions. Clearing the air passages of mucus and amniotic sac contents, gentle stimulation and gentle artificial respira-

tion are important procedures.

4. *Proper feeding.* The newer concept of feeding premature babies has been aptly named "minimum feedings." Perhaps no other one factor has contributed more to the successful handling of premature infants than proper feeding. A "food tolerance" is established for each baby individually, beginning with very small feedings and increasing the amount gradually. The value of human breast milk is emphasized, not only from a nutritional standpoint but for its qualities of cleanliness, convenience, economy, and protection against infections.

5. *Prevention of infections.* Aseptic technics for preventing skin, respiratory and intestinal infections, and provision of adequate isolation are basic protective measures for the infant.

6. *Minimum and gentle handling.* In order to conserve the infant's energy and provide maximum rest, it should be disturbed as little as possible for the first 16 to 24 hours after birth.

7. *Nursing care important.* Few situations in medicine require such constant vigilance and patient attention to details as the care of a premature infant. Proper nursing care plays a very important part in successful management.

8. *Hospital care.* Care in a properly equipped and well managed hospital should be provided if possible.

9. *Follow-up care.* To expend much care, effort and money in bringing a premature infant through the critical neonatal period, only to lose him soon afterward from some preventable condition, would be poor foresight indeed. Avoid such tragedy by preliminary teaching of the mother and preparation of the home for reception of the infant, and by continuous medical supervision of the care, feeding and development of the infant.

A loyal and useful helper to the physician is the public health nurse, who by virtue of her training can make a significant contribution to the baby's welfare. Teaching the mother how to carry out the physician's instructions, the organization of the home for the care of the infant, and the giving of emergency nursing care are a few of the activities which she capably executes.

COMMENT: The program in Minnesota directed towards the improvement of care of premature infants has made good progress in reducing infant mortality rates. Made possible by maternal and child health funds coming to the state under the provisions of the Social Security Act, the program is conducted by the Division of Child Hygiene of the State Department of Health in coöperation with the Minnesota State Medical Association, the Minnesota Hospital Association and the Medical School of the State University. Mississippi has a similar program which is growing in value as more widespread application is made of present facilities and knowledge relating to the care of the premature infant. Some are slow in grasping the full significance of the program but further progress will be realized when complete use is made of all existing knowledge and facilities.

State Board of Health

Felix J. Underwood, M.D.

VENEREAL DISEASE CONTROL ACTIVITIES

Jan. 1—June 15, 1941

In a report to the State Board of Health at its June 27 meeting, Dr. D. V. Galloway, Supervisor of Venereal Disease Control, pointed out that seven additional counties have organized venereal disease clinic service since January 1, 1941. Seventeen new clinics have been organized in these new counties and others which had previously had a clinic program. There are now 50 counties with clinic service and the clinics total 178. Approximately 20,000 people are under treatment each week for syphilis.

Syphilis control activities for the first four months of 1941 are shown in the following tabulation:

1941	New Syphilis Cases	Cases Syphilis Discharged	Arsenical Treatments Administered	Heavy Metal Treatments Administered	Total Clinic Visits For Treatment
Jan.	3,594	1,571	19,591	18,394	42,234
Feb.	1,987	1,320	19,110	19,803	41,010
Mar.	2.075	1.443	21,053	23.920	49.645
Apr.	2.486	1.216	25.339	26,820	58,336
TOTAL	10.142	5.550	85,093	88,937	191,225

Within the past three months a modest beginning has been made on gonorrhea control service. In April, 15 counties reported 75 cases of gonorrhea under treatment. Plans are under way to extend gradually the gonorrhea control service as fast as feasible. Two problems are confronted in the extension of the gonorrhea control activities. First, the burden of syphilis is so great in many counties that the clinic facilities are inadequate for syphilis control alone, so that it is impracticable to place gonorrhea cases on the present clinic burden. Also financial limitations indicate that syphilis must continue to be the disease on which chief attack is centered.

The recent introduction of sulfathiazole as a treatment of gonorrhea has furnished a very practicable method for its control. Reports indicate that sulfathiazole will cure at least 80 per cent of all cases of gonorrhea and eliminate them as sources of infection in all but approximately 10 per cent.

Venereal disease control activities were carried on at Camp Shelby as part of the National Defense effort. Dr. Paul T. Erickson, the Venereal Disease Consultant, reported on June 1, that syphilis and gonorrhea had responded satisfactorily to efforts made in the Camp Shelby area for their control. Camp Shelby has at the present time approximately 48,000 soldiers. This has been gradually increased from 10,500 in October, 1940. During the six months' period, October, 1940 to April, 1941, a total of 133 cases of gonorrhea and 20 cases of syphilis were reported among the soldiers at Camp Shelby. Of these new cases only 22 per cent received the infection in Mississippi; the remainder of new cases of syphilis and gonorrhea were contracted from 13 other states scattered from Florida to New York and from Indiana to Texas. The general infection rate for venereal diseases at Camp Shelby among the soldiers is now approximately 27 per thousand men per years, which compares with the regular Army rate in peace time of 30 per thousand men per years.

In connection with activities reported above, the supervisor made 83 field visits to 42 counties. These visits were for the purpose of standardizing and improving venereal disease clinic technique, to assist new health officers in the establishment of clinics, for staff conferences with county health department personnel, and for clinic staff conferences with the private physicians who are operating the clinics.

Conferences were held in 9 counties which were attended by 76 of the private physicians who were acting as clinicians. Collaborating in these conferences were Dr. A. L. Gray, Director, Preventable Disease Control, and Dr. P. T. Erickson, Venereal Disease Consultant. This attendance was surprising as it included all but 2 of the 78 coöperating physicians in these counties. At these conferences the latest methods of treatment and control of venereal disease were discussed and plans made to give the syphilis and gonorrhea patients in the the clinics the very best treatment which is now available.

Considerable interest has been manifested by various clubs and groups over the state in new legislation to require an examination for venereal disease of persons who are planning to be married; also, a requirement that all physicians treating women in the ante partum stage make blood tests to determine whether or not syphilis is present.

This legislation was proposed by some individuals in the state two years ago but it was felt at that time the clinic program would not be adequate to undertake the enforcement of such laws. However, since approximately two-thirds of the people of the state are now within areas which have organized venereal disease clinic service, such legislation would appear to be much more feasible.

* * * *

MOUTH HEALTH ACTIVITIES

Miss Gladys Eyrich, Supervisor, Mouth Health Activities, reported to the Board that the outstanding growth in the mouth health program is school dental clinics. Conducted by dental hygienists and dentists in schools or dental offices, they are designed to bring dental service not only to the indigent but also to those in rural areas who can pay small dental fees. Approximately half the clinic children have paid for their work. The others are financed by the dentists, PTA's and civic clubs. An interesting fact is that the dentists receive a fair remuneration for a day's work. Dentists who have participated in this service are well pleased with the results.

The clinic reports from six counties show that most of the extractions of permanent teeth were done in new clinic areas. In Washington County where the clinics started four years ago, only seven permanent teeth were extracted for 272 children while 12 teeth were lost at the first clinic serving 19 children in another county. In Leflore County 117 children had corrections who had never before been to a dentist.

Three other counties have had clinics in dental offices. Jackson County established a clinic at the health department this spring, the board of supervisors and the State Board of Health providing the funds. This makes two health department dental clinics in the state, one having been operating in Lauderdale County for a number of years. At the Jackson County Clinic, the four local dentists serve as operators, being paid an hourly fee.

Eight schools in the state are 100% in dental certificates, one other has just one child who did not get corrections, and three report 95% or over. Two schools which reached 100% through the school clinics represent a real achievement in social welfare as well as in health. The first is a rural school enrolling children of tenant farmers and the second is a Chinese school, enrolling those whose parents do not all understand English.

* * * *

Reports reflecting similar progress were made by the various other division directors to the Board.

County Societies

EAST MISSISSIPPI MEDICAL SOCIETY MEETING

The East Mississippi Medical Society met in regular quarterly meeting at the Lamar Hotel, Meridian, on June 19 at 3 P.M. Since Dr. C. A. Kirk was in St. Louis taking postgraduate work, Dr. T. G. Cleveland, president of the Lauderdale County Medical Society, presided.

During the business session Dr. C. A. Kirk, president, resigned by letter, and his place was filled by Dr. Cleveland, duly nominated from the floor and unanimously elected.

Among the distinguished visitors present were Dr. John Morrison, of the Commonwealth Fund, New York City; Dr. A. Street, president of the Mississippi State Medical Association; Dr. John Darrington, Yazoo City; Dr. Felix J. Underwood, Jackson; and several other visitors from other parts of the state.

Immediately following the conclusion of the scientific program, Dr. Street made an address to the society.

QUARTERLY MEETING OF THE EAST MISSISSIPPI MEDICAL SOCIETY

The scientific program was as follows:

"Congestive Heart Failure"—I. H. Jones, Meridian.

"The Practice of Obstetrics in Mississippi"—Dudley Stennis, Newton.

"Cancer Control—A Public Health Problem"—Felix J. Underwood, Jackson.

"Differential Diagnosis of Syphilis"—(Lantern Slides)—J. G. Thompson, Jackson.

Symposium on the liver—(Each presentation ten minutes):

a. "Role of the Liver in Anemias"—L. T. Carl, Jackson.
b. "Abscesses and Cysts of the Liver"—J. W. Barksdale, Jackson.
c. "Pathological Physiology of the Liver in Cardiovascular Disease"—T. E. Wilson, Jackson.
d. "Cholecystitis and Cholelithiasis—Medical and Surgical Treatment" (Lantern Slides)—R. L. Clark, Jackson.
e. "Tumors of the Liver" (Lantern Slides)—J. C. Henthorne, Jackson.

DESOTO COUNTY

While in Biloxi recently we had the pleasure of seeing Beauvoir, the most famous home in Mississippi, where the last days of the Honorable Jefferson Davis, President of the Confederate States of America, were spent. Mr. Davis had a great friend at Beauvoir, who invited the Davis family to visit her home, and it has been said that she, Mrs. Sarah Dorsey, gave Beauvoir to them. However, this is a mistake. He and Mrs. Davis purchased this home and the deed may be seen in the Confederate Museum in Richmond, Va.

Mrs. Dorsey was very fond of Miss Winnie Davis and mentioned her especially in her will. The winsome Miss Winnie was affectionately known as "The Daughter of the Confederacy."

Mr. Davis was a Kentuckian by birth, a Mississippian by adoption. His grandfather was a colonist from Wales; his father was an officer in the Revolutionary War and rendered important services to the colonies. Mr. Davis was a West Pointer who fought in several Indian campaigns. Having moved to Mississippi he was engaged in civil life, owning large farming interests in Warren County. When war began with Mexico, he determined to reenter military life, and promptly resigned from Congress in June, 1846, to accept the position of colonel of the First Mississippi Volunteer Rifles, to which he had been unanimously elected. He received severe wounds and established a reputation for initiative and gallantry and skill as a soldier.

On his return home he was appointed and later elected United States Senator. He served with superior ability as Secretary of War in the cabinet of President Franklin Pierce during the entire four years of the administration. He was again returned to the Senate and later became "Chieftian of the Confederacy." He at all times was a patriot, a statesman of the very highest rank, an eloquent and convincing speaker, a vicarious sufferer for his beloved Southland, but the crowning glory of this famous Southerner was his stainless purity and sincere piety, a Christian gentleman.

Mr. Davis was born June 3, 1808, died December 6, 1889. He was buried temporarily in New Orleans and later his remains were removed to Richmond, the capital of the Confederacy, where there was erected a tomb and monument of beautiful design.

Beauvoir is now open to the public as a shrine to the memory of the only President of the Confederate States of America.

* * * *

If you, or I, can ultimately give to the world a single volume, or line, or thought which will enable our fellow men and women to enjoy life a little more fully, or endure it a little more easily, then we shall not altogether have labored in vain.—Ian Tays.

BONE TRANFUSION

Drs. L. M. Tocantins and J. F. O'Neill, of Jefferson Medical College, Philadelphia, find that blood can be transfused through the bones as well as through the veins. This does not mean that the vein method will be abandoned, but it does mean that when it cannot be easily used, which may happen in cases of shock and dropsy, the preferred route may be that of the bones. The blood is injected into the marrow and finds its way into the blood stream. Glucose and salt solutions can be similarly administered.

* * * *

Nothing seems to astonish us these days. It is said that the female of the species rarely has peptic ulcers. Scientists of Wayne University, Detroit, on this hunch that female hormones confer natural immunity, made a purified extract of the urine of normal, healthy women, injected it under the skin of dogs in whom they had produced peptic ulcers. In several weeks the dogs recovered. Within the last two years the scientists have tried experimental urine injections on 60 patients with "highly encouraging results." What the healing substance is, no one seems to know exactly. But they do know that in small amounts it prevents ulcer growth without interfering with gastric secretions.

Some patients who had suffered for years were cured or very much benefited and returned to their normal habits of living.

* * * *

In no field of endeavor in public health or in medicine has there been such enormous progress as has been made in the last four years in the treatment of tuberculosis.

Thoracoplasty is used for the closure of chronic cavernous tuberculosis with marvelous results. People who seemingly have both feet in the grave, after thoracoplasty are let out of the sanatorium and are about as well as most of us.—Dr. J. A. Hayne, Columbia, S. C., June, 1941 issue of S. M. A. Journal.

* * * *

The longest telephone line in the world extends from Moscow to Kabaroisk, Siberia. It is around 5600 miles in length.

* * * *

For the physician there is only one rule: Put yourself in the patient's place.

* * * *

WHAT'S THE USE OF WORRYING?

Here is consolation for every man who has registered and expects to be drafted in the great war lottery soon. It comes from an Atlanta boy who has been on the firing lines in France and knows whereof he is speaking:

"You have two alternatives, either you are drafted or you are not. If you are drafted you have two alternatives—you are in camp or you are at the front. If you are in camp you have nothing to worry about. If you are at the front you have two alternatives—either you are held in reserve or you are sent to the firing line. If you are in reserve you have nothing to worry about. If you are sent to the firing line, you have two alternatives—either you fight or you don't. If you don't you have nothing to worry about. If you do, you have two alternatives, either you get hurt or you don't. If you don't you have nothing to worry about. If you do get hurt you have two alternatives, either you are slightly hurt or badly hurt. If you are slightly hurt you have nothing to worry about. If badly hurt you have two alternatives—either you recover or you don't. If you recover you have nothing to worry about. If you don't recover, then you are dead and can't worry. So what's the use of worrying about the draft?—*Waycross, Ga., Herald.*

Rt. 4, Memphis, Tenn. L. L. Minor,
June 18, 1941. Editor.

Woman's Auxiliary
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GREETINGS TO THE MEMBERS OF THE WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

MRS. W. K. STOWERS
Natchez, Miss.

It is your faith in me that has made me willing to assume the great responsibilities and duties of this office. Only through shared responsibility can our organization grow and our work go on. Each member will have had a part in making this an organization with roots; and her only reward, a certain peace that comes with a task well done.

It is the privilege of each member to express new ideas, offer suggestions and criticize old ways, making it everyone's auxiliary, a stronger and a better one. Our auxiliary may be compared to the old saying: "A chain is only as strong as its weakest link."

It seems to me that now, if ever, unorganized counties should be ready to join us. If war comes to America, we will need every doctor's wife. The ruthless destruction of modern warfare has brought to our attention famine, disease, care for refugees and Red Cross work and other opportunities for service.

We are proud to stand by our husbands in their service to mankind; let us be prepared in this time of unrest to face new problems with courage, energy and faith.

As always, our own Preventorium with the annual sale of Christmas Seals holds first place in our hearts.

HYGEIA chairman, please continue your interest in placing HYGEIA where the public may have access to it—in beauty parlors, barber shops, schools, libraries, and doctors' offices.

The BULLETIN insures an informed organization—with its latest news, information and programs of the Auxiliary.

Auxiliary presidents, I feel that your understanding of your own local needs will guide your work for the coming year.

Each officer is requested to keep past, present and future records of her office to insure well informed leaders. Each member should keep before her the slogan: "Every eligible doctor's wife a member," for she should share in the responsibility of increasing the membership of her local auxiliary. Giving of our time and ability has been stressed, but little has been said about personality. Where one has failed another may be successful.

Auxiliary members, be present in Jackson, when your new officers are elected, cast your vote and pledge your coöperation. Plan your year to include auxiliary activities.

Mrs. Mosiman, our national president, sends us this message:

"To build on the Foundation's of Yesterday—with the Tools of Today—the better Medical World of Tomorrow."

* * * *

We have just returned from the A. M. A. Convention in Cleveland, and, since so few were able to attend, I would like to give you a few of the highlights.

The Convention of 1941 should hold more interest than ever before for the fact that since it was held in Cleveland the doctors' wives in that city were spurred to organize.

It was our privilege to hear such distinguished speakers as Dr. Van Etten, Dr. Bauer, Dr. Lahey, the Honorable H. W. Summers and Dr. Fishbein. I wish it were possible to tell you every word that was said. Excerpts include:

"In these troubled times we are all looking for the part we, as individuals, may play in National Defense. Nutritional Defense must be stressed. Health Defense is National Defense. We must be well informed on health, for nutrition-facts are the tools of our trade. We have at our command health literature, HYGEIA, magazines, radio and exhibits. Defense against disease is as vital as defense against war. Housewives, use these weapons! That is your call to colors."

We were reminded of the changes and sacrifices that have come to so many doctors' families already.

Six definite opportunities for service were offered:

1. Establish Housing Registry.
2. Provide recreation for Doctors.
3. Inform doctors where and when the medical meeting will be held.
4. Encourage doctors and their wives to keep in touch with the home organization.
5. Encourage home associations to keep their records and pay their dues while away.
6. At all times coöperate with the A. M. A. in National Defense.

Each member will have an opportunity to help with this unusual page in the history of our Auxiliary. Let each of us be faithful to the trust our parent organization has put in us.

JENNIE BISHOP STOWERS, President,
Woman's Auxiliary to the Mississippi State Medical Association.

FOUR-COUNTY AUXILIARY

The ladies of the Four-County Auxiliary met June 17 in the home of Mrs. W. H. Anderson in Booneville, with Mrs. L. L. McDougal sharing the duties of hostess.

Presided over by Mrs. M. M. McMillan, of Guntown, the business session consumed the early part of the meeting. Plans were made for the annual picnic which was held in Tupelo on July 1, celebrating Doctor's Day. All the doctors and their wives from Lee, Itawamba, Pontotoc and Prentiss counties were invited to enjoy this occasion on the lawns of the Community Hospital at Tupelo.

A quiz program, conducted by Mrs. Fred Muse, of Booneville, entertained the guests, and a dainty refreshment plate regaled the guests as a concluding feature of the meeting.

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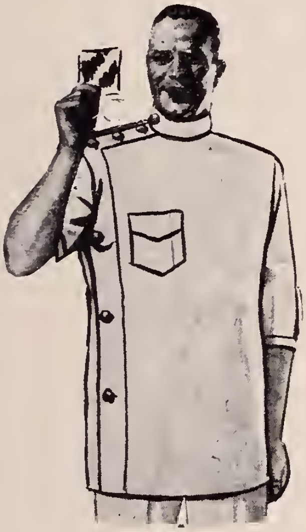

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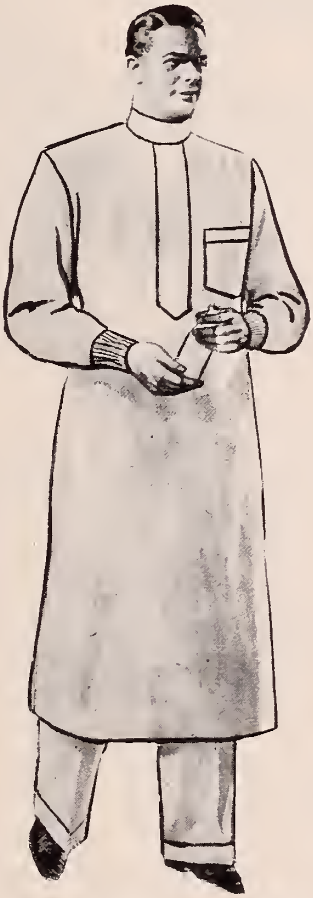

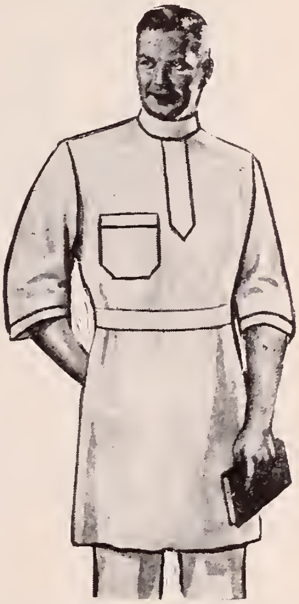

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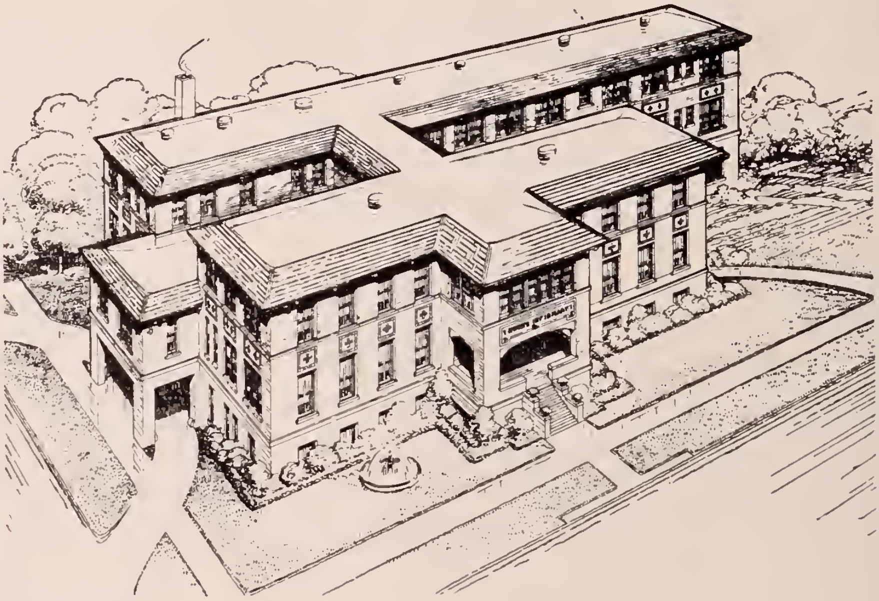

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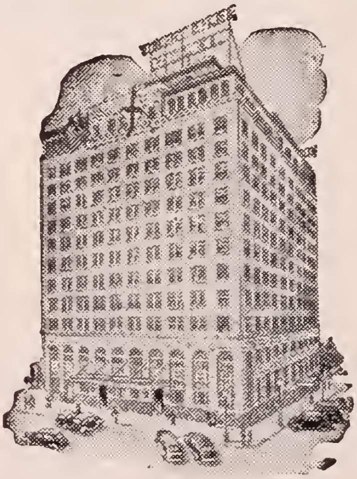

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The Mississippi Doctor

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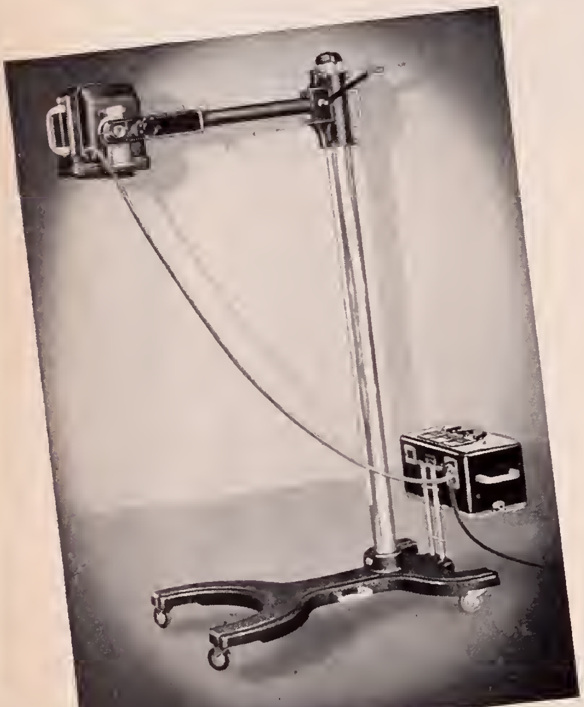

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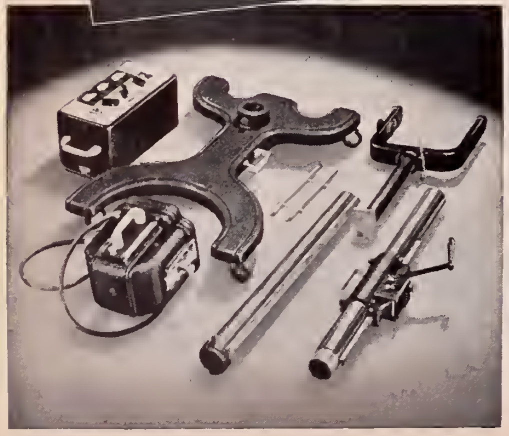

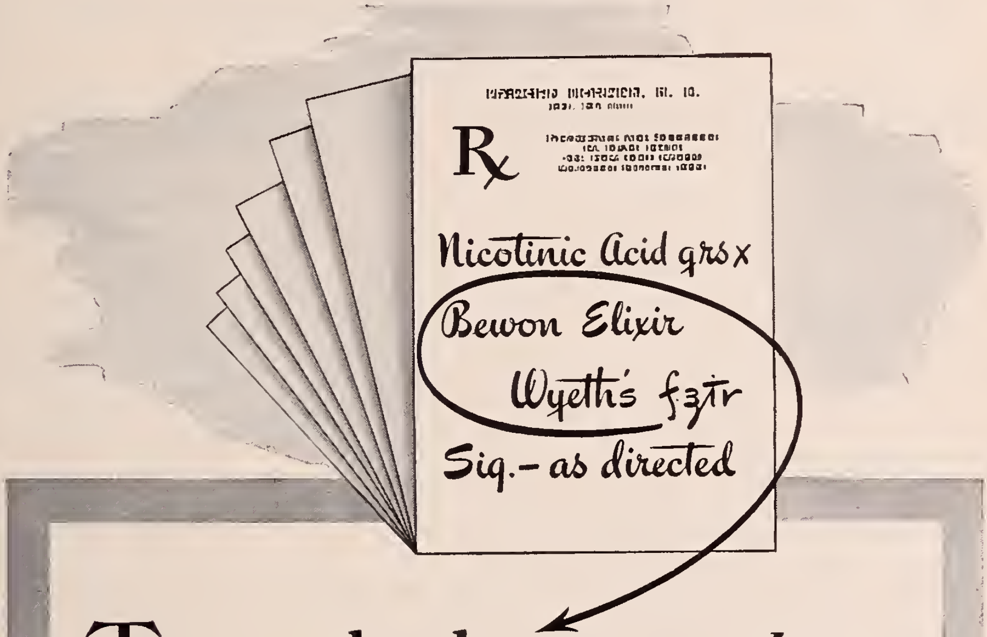
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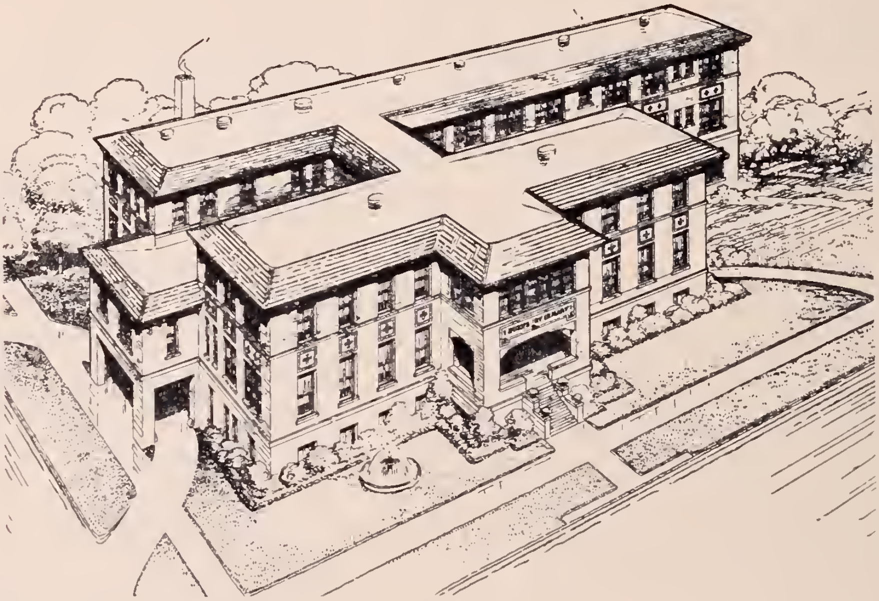

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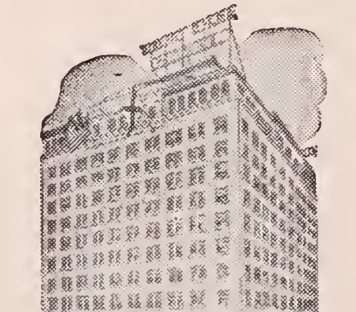

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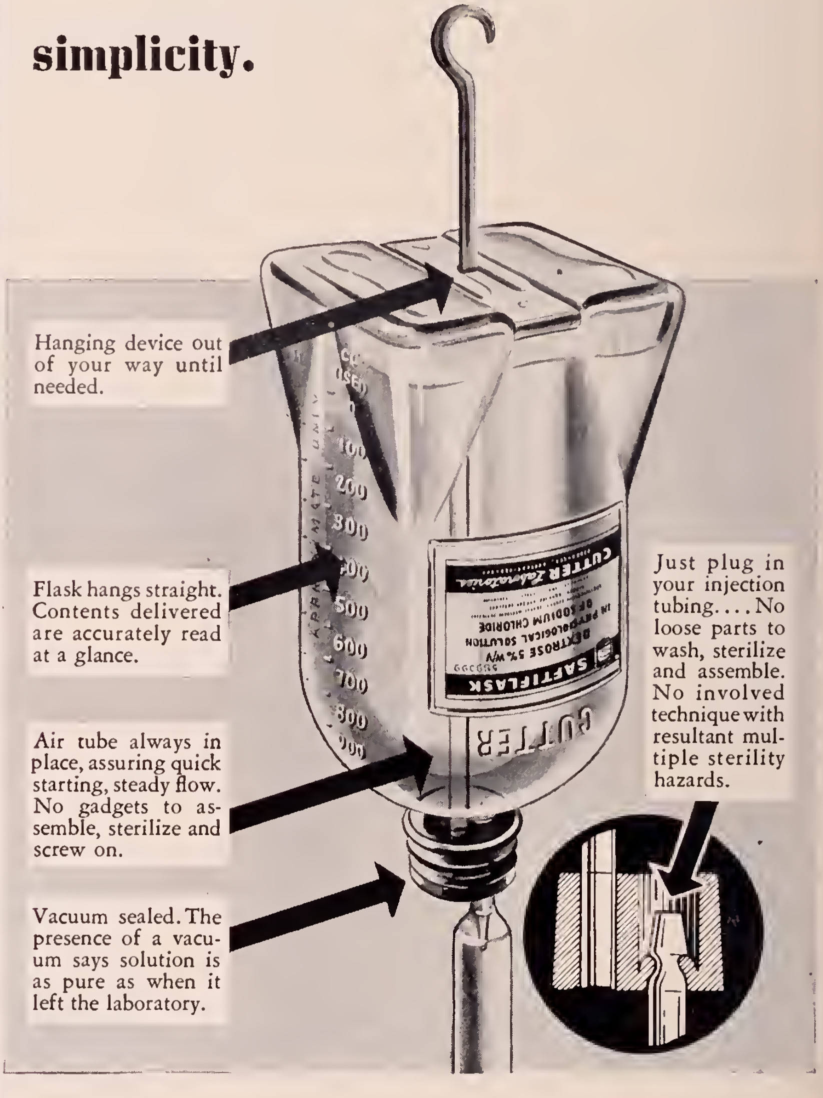
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Diagnostic Requirement and Early Operative Treatment of Squint With Case Report*

OSCAR WILKINSON, M.D
WASHINGTON, D. C.

MUCH is being done at the present time for the cross-eyed child, much more than ten years ago, very much more than was done twenty years ago, and a complete change of attack has been made during the past thirty years.

Notwithstanding the great advance made in our treatment, many are hopelessly neglected and still more are but poorly handled. The majority of us either don't understand the significance of early treatment, or we are timid about assuming our responsibility.

This may be due in part to want of courage to attack the problem in a very definite way. This in turn may be due to the feeling that our diagnosis is not sufficiently accurate or our operative procedures are not sufficiently effective. To aid you in this and to encourage you to do your duty to this afflicted class, I shall presume to review the necessary diagnostic steps and afterwards indicate to you the necessary operative procedures to secure the maximum good effect.

White (James W. White, Archives of Ophthalmology, Dec., 1940, Vol. 24. pp. 1113) has indicated the minimum procedures in the examination of a case of squint as follows:

(a) History, including observations by the examiner.
(b) Vision.
(c) Refraction.
(d) Accommodation.
(e) Deviation for distance.
(f) Deviation for near vision.
(g) Deviation in the six cardinal fields.
(h) Convergence near point.

To this I would add:

(i) Determination of retinal correspondence —very important.
(j) Monocular lateral rotation.

I shall assume that no special remarks as to the importance of the first four topics, history, visual acuity, refraction and accommodation, are necessary. We are all agreed as to their importance and necessity and follow much the same procedure in making the examinations.

There are, however, two points with reference to observation and history taking by the examiner I would like to stress. First, is the observation of the patient. Many ophthalmologists are of the opinion that a very high percentage of squint is originally caused by a paralysis or a paresis (White, Duane, Bielschowsky) and that more or less paresis remains and this paresis usually involves one of the elevators or depressors of one or both eyes. Where such is the case there is a head tilt or a chin tilt in a large number of these cases and it can readily be observed by simply watching the patient for a few moments. Where there is a head or chin tilt look for a vertical paresis with an accompanying overaction of a direct antagonist or contralateral synergist. The second point I would stress is the hereditary history. This is often important, as it has been my observation that hereditary cases occur earlier and are more frequently associated with abnormal retinal correspondence; hence, they are mort apt to be complicated and should be operated on earlier and watched more carefully.

MEASUREMENT OF THE DEVIATION: Nothing is so important in making a diagnosis in a case of squint as the accurate measurement of the deviation in the various directions of gaze, for both distance and near point. Heretofore this has been much neglected.

Where diplopia is present and increases in any direction there is a frank paralysis. This removes such a case from the discussion of the ordinary concomitant case which we propose to discuss here. In the congenital paretic cases which are frequently seen in so-called concomitant squint, there is usually no diplopia, which is due to suppression or tilting of the head to avoid the diplopia. This tilting is present in many of our so-called concomitant squints and must be looked for in all cases, particularly those with a head tilt. This will be noted under discussion of the concomitance screen test. In the ordinary concomitant squint case the amount of deviation at a fixed distance should be the same when either eye fixes and where no vertical deviation is present, it is much the same in all directions of gaze, with the exception that on elevation of the eye a slight divergence is encouraged and on depression a slight convergence is encouraged. Where there is an associate vertical deviation this is apt to vary in one or more of the cardinal fields of gaze, due to a paresis of the elevators, and this in turn may materially change the amount of esotropia or exotropia present.

---

*Read before the section on Eye, Ear, Nose and Throat at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 13, 1941.

Accurate measurements of the amount of deviation in all directions of gaze is as necessary as accurately measured operative procedure when we are operating to correct the defect. How can one plan to correct a certain defect until he is familiar with all the aspects of the deviation and is aware of this difference in the amount of the deviation at different distances and at different positions of gaze? When we realize that an entirely complete diagnosis frequently is not made, we can well understand why many will maintain that *no* one can estimate what amount of correction can be expected to be secured by a certain number of millimeters of recession or resection. Our final results will be good in proportion to our diagnostic acumen and in proportion to our skill and judgment in selecting and executing the properly measured operative procedure in a given case. Several measurements should be made and these under different circumstances—without and with a cycloplegic, when the child is tired and when he is rested, with glasses and without glasses.

It is my custom to take the measurement of the deviation in very young children with the Holzer modification of the Priestly Smith type. This can be used on a child as young as one year of age. It can be used in emblyopic cases and in cases without fixation. It is very accurate for taking the deviation at 60 cm. and fairly accurate for measuring the deviation for distance.

This measurement is best taken by using a bright light back of the patient and reflecting the light from a concave mirror with a focus of about 40 cm. This gives a brilliant corneal reflex which can be readily seen. The relative position of the corneal reflex of the straight eye with reference to the center of the pupil can be adjusted to the deviating eye. This measurement is accurate to a high degree and is the simplest measurement one can make on the very young child.

Where the child is old enough and where there is definite central fixation, the most accurate method of measuring squint is by the use of prisms in the cover or screen test as taught by Duane. The screen test, the Maddox rod screen test and the screen concomitance test made at 6 meters and at 33 cm. will not only indicate the amount of squint but will determine the over- or underacting muscle. The comitance screen test will pick up the lateral and vertical pareses, and enable us better to determine the type of operation necessary to secure the best results. White maintains that the cause of the wide variations obtained at times from similar operative procedures is due to the fact that a proper diagnosis has not been made and the most effective operative procedures have not been used. There is no question but that he is correct. Where the vertical deviation is dominant it must be cared for either before or at the time of the operation for the lateral deviation.

The most frequently marked vertical deviation is due to the overaction of the inferior oblique muscle. This is associated with a paralysis or paresis of one of the elevators of either eye. Where this defect is associated with a marked internal squint, the inferior oblique can be recessed at its attachment to the eye ball at the same time one is doing a resection of the external rectus. If the operator prefers, the inferior oblique can be tenotomized at its insertion either through a skin or conjunctival incision. When this is done with proper care there is no deforming scar left.

CONVERGENCE NEAR POINT AND LATERAL ROTATIONS: Convergence near point in esotropia is only relative. That point at which the deviating eye is seen to turn out as an object of fixation is brought towards the bridge of the nose is the relative near point. In cases with a near point of 20 to 50 mm. it is usually advisable to weaken the internal rectus of the deviating eye, particularly if there is a high degree of deviation. With a relative near point of 80 to 100 mm. no operative procedure is indicated on the internus except in high degrees of deviation and in such cases only a slight weakening operative procedure on one eye is justified. I am speaking of the very young child in whom we hope to get binocular vision.

As to monocular lateral rotations of any excessive convergence of more than 2 mm., i.e., when the center of the cornea passes the inferior lacrimal punctum more than one or two mm. in forced effort to turn the eye inward, there is an excessive action of that internus which will usually be manifested by an associated near point of relative convergence as mentioned above.

If on rotating the eye externally the external margin of the cornea can be brought to the external canthus there is no weakening of the external rectus, neither is there any under or over strength in the associated internus. As a matter of fact, there is *no muscular defect* in such cases, but a faulty innervational defect and if glasses and orthoptic training do not give the desired effect *no* particular weakening operation should be done on the interni, but our correcting procedures must be done on the externi. This I will illustrate in the pictures to be shown.

In cases in which the external margin of the cornea cannot be brought to the external canthus, we register these as defective external rotation and where the deviation of the center of the cornea is beyond the lower punctum we have an excess of internal rotation. This is recorded in mm., i.e., an eye whose corneal margin fails by 2 mm. of reaching the external canthus is recorded external rotation minus 2 mm. If there is an internal deviation of the center of the cornea of say 3 mm., that is recorded as internal rotation of plus 3 mm.

This is important as such eyes usually require some operative weakening of the internus.

I wish to warn here against the very definite trend at the present time towards excessive operations on the interni. I consider this the greatest mistake in the modern treatment of squint. We must preserve the dominating action of the interni. It is the internal recti that enable us to do all of our close work and to perform deliberately an operation that will paralyze our convergence as is often done too freely and frequently by double recession; is to cripple that patient's ability to do prolonged work the balance of his life. The same corrective effect can be attained without any physiological disturbance by doing double resections of the externi, as I shall also show you with pictures.

RETINAL CORRESPONDENCE: The significance of the presence of normal correspondence, or on the other hand abnormal retinal correspondence, is not usually appreciated. In any case of squint in the young, say up to 10 years of age, in whom there is normal retinal correspondence whose squint occurred after 3 or 4 years of age and whose visual acuity is or can be made as good as 20/40, one should get binocular vision with depth perception. This can be attained even without orthoptic treatment in many instances after the proper operative treatment. The natural desire for binocular vision will cure many of these cases. Of course, the use of glasses and orthoptics will markedly expedite and perfect this result.

Where the visual acuity is bad, say 20/70 or less and cannot be further improved, no such results can be expected, but even in these cases second grade of binocular vision is often obtained and is used in practically all of the visual acts except for very minute work. This can be easily demonstrated by examining with the Worth 4-dot test.

Where there is *abnormal* retinal correspondence the whole story is different. The case is difficult and I may say hopeless in proportion to two things: first, age of occurrence, and second, duration of the squint, or as Travers puts it, "the duration of life in which the child has squint." If the squint is from birth, or occurred in the first year of life and has been present for three or more years and is associated with abnormal retinal correspondence, the prospect of a *real cure* is very remote. The only hope for this type of case is very early operation, setting the eyes as nearly straight as surgical skill can accomplish. This early straightening of the eyes prevents the two things that defeat, and I might say destroy, our efforts to restore the squinting eye to normal. They are *amblyopia* from non-use and the development of *abnormal retinal correspondence*. Very early operations are the *only real* remedy for this class of cases.

Abnormal retinal correspondence can be determined in many children of 2½ years and certainly in most at three years of age. This can be done in older subjects with one of the major amblyoscopes, by using slides made for that purpose, or by the use of the after image test. A less accurate but an easier test to make, and one which can be used on younger children, is to place a red glass before the crossed eye (in esotropia) and produce double images with a 5 or 6 dioptre prism base up or down and note the position of the red image. If it is homonymous (on the side of the deviating eye) normal retinal correspondence is present. In abnormal retinal correspondence it is heteronymous or on the opposite side from the deviating eye. The opposite is found in exotropia. I doubt if abnormal retinal correspondence develops before two years of age.

Operative Indications: If glasses, atropine and orthoptic training do not materially reduce the degree of deviation in three months' time; they probably never will. If we could operate on every case of squint, which does not improve with treatment, within the first year after the beginning of the deviation, our *real cures* would be doubled. Cases which develop at or near birth should be operated upon certainly by the end of the second year. This, of course, does not obtain where there is definite pathology, and I know of no more harmful policy in ophthalmology than the one which lulls us into the vain hope that glasses will eventually cure our squint cases. That false hope has destroyed thousands of eyes.

Operative Procedures: For vertical deviations we can recess or resect the recti elevators or depressors. It is usually best to strengthen the weaker muscle instead of weakening the stronger. Where there is marked upshoot due to an overacting inferior oblique, its tenotomy is indicated. This applies to paralytic cases as well as to concomitant ones. Never unduly weaken a depressor, as the ability of the eyes to turn down may be so impaired as to interfere greatly with close work.

In lateral deviation, resections and recessions are also indicated. Due regard must always be had to the importance of the interni. It is always more sane and logical to strengthen the so-called weaker muscle than unduly to weaken the necessary strong one. Where there is the slightest hope of securing binocular vision, no case of esotropia of even moderate degree should ever be corrected by recession.

I shall now show my operative procedures on the screen: In the resection operation, I use a central mattress suture similar to that described by Snellen in 1869. This mattress suture secures a much stronger anchorage than is obtained by the Reese operation. You will observe the technique used in the various measured operative procedures in lantern-slides. These have been fully described by me in Archives of Ophthalmology, March, 1934, Vol. II, pp. 423-432.

I shall now present to you pictures showing different types of crossed eyes with the results of different operative procedures and shall endeavor to point out the reasons for successes and failures.

1408 L St. N. W.

DISCUSSION

Dr. Sterling S. McNair (Jackson): Dr. Wilkinson has presented a most excellent paper, with slides, on a most timely subject. I know of no branch of ophthalmology that offers a more fertile field for improvement in our results than does the management of strabismus cases. I believe that most of our poor results are errors of omission in the study of these cases before the proper treatment is undertaken. I am sorry to say that many men handling strabismus cases do not determine to a satisfactory degree whether the case is one of concomitant monocular strabismus or whether it is a true alternating type. Another important phase of the handling of these cases is the history as to how long the squint has been present, and at what age the strabismus appeared. I believe even before any specific type of treatment should be instituted, the type of strabismus and its amount should be determined and the effect of cycloplegia on the amount of strabismus should be recorded, as: If the strabismus is lessened by use of atropine or proper glasses the chances for binocular single vision with depth perception is greatly enhanced. Dr. Wilkinson has well brought out the fact that a proper determination of which muscle is over acting and which muscle has insufficient power, is of paramount importance in deciding which muscle should be operated. Orthoptic training is scarcely mentioned in Dr. Wilkinson's paper and probably for the reason that this paper deals mostly with the operative treatment of strabismus. Nevertheless, I feel that orthoptic training has a definite place in treatment of squint and especially so in children under seven years of age, at which time the fusion center is usually fully developed if it will ever develop. Orthoptic training should be used both pre- and postoperatively in treatment of all cases of strabismus where there is any hope of attaining binocular single vision with any degree of fusion. There is only one point in this paper that I cannot fully agree with the author, and that is his views concerning a recession of the internal rectus muscle. I have followed many cases of young children who have had a moderate recession of one internal rectus muscle for up to 20° of convergent concomitant strabismus and in these cases I have not seen it interfere with their convergence for close work in later years. Dr. Gibson in Archives of Ophthalmology (Vol. 23, pp. 477) of March, 1940, reports a series of 66 cases of which 44 had a bilateral recession of internal recti done and he advises it in cases that show bilateral equal excess rotations of the internal recti muscles with fairly normal external recti muscle. Of course, if the amount of strabismus is over 30°, a recession with some type of strengthening operation on the external rectus is indicated. For strengthening an external rectus muscle I am partial to the Worth advancement. I have thoroughly enjoyed Dr. Wilkinson's paper and I feel that the chairman of the section should be congratulated on being able to secure such a fine essayist. I thank you.

DR. HUGH H. JOHNSTON (Vicksburg): Dr. Wilkinson opened his paper by saying that much is being done at the present time for the cross-eyed child, much more than was done ten years ago, and very much more than was done twenty years ago, and a complete change from what was done thirty years ago. He did not state, though, through his modesty, that he has been necessarily responsible for this advance, both by his teaching and his text on the cause and etiology and treatment of strabismus. He has discussed this treatment of these unfortunate children both in his paper and throughout his entire text. I do not think we can emphasize this treatment to these children too much. We oftentimes are confronted with the problem of having the parents tell us that they will outgrow the squint. No doubt all of you have had the same experience but I doubt if in any true case of strabismus the child has outgrown the trouble. Physicians sometimes hold the same opinion and they advise parents to delay the treatment. I think this is one of the worst mistakes that can be made. There is a condition called apparent strabismus, which is responsible for this. This is a condition due to the shape of the nose and also due to the overlapping of the skin at the angles of the eye, which gives the child the appearance of having a real squint. Actually, when he grows older and his face begins to broaden he outgrows this appearance.

Dr. Wilkinson said one of the most accurate ways of determining abnormal retinal correspondence is by the use of one of the major amblyoscopes. I am using the Clarke's synoptophore, which gives good results. It is an accurate aid in the diagnosis of some of the other vertical and horizontal deviations.

I think we have been very fortunate in having a man of Dr. Wilkinson's caliber to talk to us and I know I have learned a good deal and I feel that most of the rest of us have too.

DR. WILKINSON (closing): I wish to thank Drs. McNair and Johnston for their helpful discussions.

Intestinal Obstruction—A Consideration of the Clinical Problem*

H. REICHARD KAHLE, M.D., AND URBAN MAES, M.D.†
NEW ORLEANS, LA.

JUST HOW disastrous intestinal obstruction can be is obvious in three series of cases reported over a period of years from Charity Hospital of Louisiana at New Orleans. In 1929 Miller reported 246 cases with a mortality of 65 per cent. In 1934 Moss reported 340 cases with a mortality of 31.7 per cent. In 1937 Boyce reported 204 cases with a mortality of 36.3 per cent. The situation has clearly improved, but a disease which is associated with a mortality of more than 33 per cent is still in need of constant attention.

Intestinal obstruction is the manifestation of a variety of conditions which differ in etiology and pathology and which differ in all respects but one (that pain is practically always present) in their symptomatology, but all of which have the same disastrous end-results. The most obvious of these results, the stoppage of the fecal current, is, curiously, the least important.

CLASSIFICATION AND ETIOLOGY

Mechanical obstruction, to which this discussion is limited, may be classified according to etiology, according to level, and according to involvement of the blood supply. Generally speaking, intussusception is the most frequent cause in infancy and childhood, hernia and adhesions in middle life, and carcinoma in old age. In Miller's and Moss's series from the New Orleans Charity Hospital hernia was the most frequent cause of the obstruction, and in this connection it should be mentioned that in spite of the wide difference in the incidence of inguinal and femoral hernia, the actual number of strangulation obstructions in each type is almost equal. In Boyce's series adhesions were the most frequent cause, possibly, as he suggests, because of the increasing frequency of previous abdominal surgery in the general population. Hernia and volvulus are the most frequent causes of strangulation obstruction, and intussusception, carcinoma, and adhesions of the simple type.

Boyce does not believe that race or sex are important considerations in intestinal obstruction. Boland, however, found obstruction to be more than twice as frequent in colored as in white patients.

PATHOLOGIC PROCESS

The pathology of intestinal obstruction is too complex a subject to be handled in a brief paper, but certain general statements should be made. The fundamental consideration is whether or not strangulation, with interference with the blood supply, has occurred. The local process is chiefly concerned with changes in the bowel wall; these changes are in turn responsible for peritonitis, a very well comprehended possibility, and physiologic perversions, which are far less well comprehended.

The peculiarities of the vascular supply of the intestinal tract, plus alterations in venous pressure, are responsible for circulatory stagnation and tissue death in intestinal obstruction. These changes occur, as in vascular diseases of the extremity, at the most distal portion, that is, the antimesenteric border. Bacterial contamination may occur even before gross perforation, and necrosis of the mucosa may play a part in the much-discussed toxemia which accompanies intestinal obstruction. Normally, none of the toxic products of digestion can be absorbed by an undamaged mucosa, but when distention occurs, as in a "closed loop," Dragstedt and others have shown that the mucosal changes which follow are soon followed, in turn, by toxemia.

The protracted vomiting of gastric juice and intestinal contents which occurs in high obstruction inevitably results in a fall in blood chlorides and the development of acidosis. Loss of fluid results in hemoconcentration and in an elevation of the blood nonprotein nitrogen. The toxic effects of obstruction resemble those produced by histamine or allied chemical substances, but the postulated "histamin-like" substance has never been satisfactorily isolated in the blood or in the peritoneal transudate, which some workers have found to be toxic.

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†From the Department of Surgery of the School of Medicine of Louisiana State University, and Charity Hospital of Louisiana at New Orleans.

The disturbance of blood potassium observed in some cases of intestinal obstruction (Scudder et al.) may play a part in the toxemia which accompanies it. Some of the blood changes observed suggest the changes which occur in burns and in adrenal exhaustion. Fine and his associates call attention to the loss of circulating blood plasma which results in distention of the small bowel and assert that the rise in the hematocrit reading as obstruction progresses cannot be accounted for solely by dehydration, influx from blood reservoirs, or electrolyte imbalance.

The oliguria and anuria often associated with obstruction have been variously explained as the result of physical changes in the blood caused by fluid loss and increased viscosity or as the result of chemical changes. Boyce considers that they may represent the second stage of the hepatorenal syndrome. He also suggests that the sudden death which sometimes follows abrupt decompression of a distended and obstructed intestine may be due to "liver shock." Elman believes that the cause may be the capillary congestion which follows sudden relief of pressure, on the analogy of the anuria which sometimes follows too sudden decompression of the urinary bladder. The absorption of a flood of toxic products by the normal mucosa below the obstruction is no longer believed to be a satisfactory explanation. For one thing, various workers have shown that such absorption does not occur. For another, the same sort of fatality may follow mere evacuation of obstructed loops by enterostomy, when absorption below the point of obstruction does not enter into consideration. Fine and his associates explain such fatalities as due to certain physiologic changes, such as loss of plasma, which have gone so far as to be irreversible.

In the usual fatal case of intestinal obstruction fluid loss, toxemia, hemorrhage and shock all may play a part, and there is seldom a single cause of death.

SYMPTOMATOLOGY AND DIAGNOSIS

The cardinal symptom of intestinal obstruction is colicky, griping pain. It is caused by increased peristalsis, by distention of the bowel wall, by pressure on the mesenteric plexus, and, in advanced cases, by peritonitis. Diagnosis, however, is by no means as simple as this flat statement would suggest. The condition sometimes manifests itself with catastrophic suddenness and leaves no doubt of the diagnosis. In many instances, however, the onset occurs with disarming insidiousness, and irreparable damage has been done before the true state of affairs is realized.

Vomiting is a very characteristic symptom of high obstruction, but it may be absent throughout the course of low obstruction. On the other hand, distention, which is frequently the most prominent symptom in low obstruction, is often entirely absent in high obstruction.

Constipation or "locked bowels" is popularly supposed to be the most prominent symptom of intestinal obstruction, and the idea, unfortunately, is held by some physicians as well as by most of the laity. Actually, one or more bowel movements may occur after the onset of symptoms, because fecal material may be in the bowel below the point of obstruction, or because the obstruction is only partial. It should be remembered, however, that the bowel wall is often seriously damaged even when the fecal current is not entirely interrupted. Repeated enemata which return clear and without the passage of flatus furnish highly suggestive signs.

In early intestinal obstruction physical examination may be entirely negative. Later it may reveal visible peristalsis as well as distention. Visible peristalsis is an invaluable sign. but it can be observed only in thin persons, in whom an intestinal loop or loops can sometimes be felt through the abdominal wall. An abdominal scar always suggests the possibility of adhesions. Tenderness and rigidity are usually absent in simple obstruction but usually present in the strangulation variety, as the result of peritoneal irritation by sanguineous fluid. Auscultation of the abdomen in intestinal obstruction often equals in importance auscultation of the chest in pneumonia. Rectal examination should never be omitted.

The temperature is usually normal in early cases, and there may be only minor changes in the pulse rate until the condition is considerably advanced.

Laboratory tests are not essential in the diagnosis of acute obstruction but may be helpful in the differential diagnosis or in the estimate of surgical risk. The white blood cell count tends to be normal as long as complications are absent, a point which may help in differentiating obstruction from an acute inflammatory condition. Blood chemistry studies suggest necessary therapeutic procedures but are of no aid in diagnosis.

The x-ray offers valuable indirect evidence, but only if it is properly used. The patient should always be in the upright position, and barium should never be given by mouth if obstruction is suspected. Multiple fluid levels practically always indicate small bowel obstruction, and careful study of the films frequently suggests the level of the pathology. Brunn and Levitin have recently described radiologic criteria which permit the differentiation of mechanical obstruction from paralytic ileus, a most important diagnostic advance if their observations are substantiated by the experience of others.

TREATMENT

Although obstruction is essentially a mechanical problem, the solution of which depends upon mechanical means, it is not the disturbance of intestinal mechanics but rather the disturbance of physiology which kills the patient. The correction of the physiologic perversion is therefore the first and in many respects the most important consideration in the therapy of intestinal obstruction.

Infusions are used routinely, both to overcome dehydration and to restore to normal the disturbed electrolyte balance which has resulted from vomiting and consequent non-absorption of sodium and chlorides. Adrenal cortex extract, which is now available commercially as eschartin, may be used in combination with other therapy, in view of the postulated adrenal disturbance associated with intestinal obstruction. Sedatives are important to relieve pain and allay apprehension but should never under any circumstances be employed until a definite diagnosis has been arrived at and some decision as to treatment has been reached.

The reduction of abdominal distention is an important phase of preoperative preparation. Oxygen is useful for this purpose, in connection with the Wangensteen method of suction or the Miller-Abbott tube. Decompression not only makes the patient more comfortable during the interim before operation, but also empties the stomach of material likely to be aspirated under anesthesia and simplifies the technical procedure by reducing the intestinal distention.

Although the Miller-Abbott tube accomplishes decompression more rapidly than the Wangensteen suction, its introduction is often not a simple matter, and its passage through the pylorus may require the persistence of a bond salesman, the training of an athlete, and the favor of the Lord. Fluoroscopy is of great assistance, and patience usually achieves results. On the other hand, it is obviously undesirable to practise many manipulations upon a very sick subject, and the importance of the time element in intestinal obstruction must not be forgotten. The complications and accidents which may occur when the tube is used must also be borne in mind, however remote the possibilities may seem. Abbott has recently described a modification of the original tube, whereby aspiration of the stomach and jejunal feeding can be carried on simultaneously. It has also been suggested that the type of obstruction as well as its location can be studied by the cautious use of barium when the tube meets the point of blockage.

The use of either the Wangensteen suction or the Miller-Abbott tube as the therapeutic method in intestinal obstruction is mentioned with considerable trepidation. The decision rests on one single consideration, whether or not impairment of the blood supply has occurred. Wangensteen believes that the decision can safely be made on the basis of the usual presence of tenderness and rigidity in strangulation obstruction and their usual absence in simple obstruction, but most other observers believe that the decision is not quite so clear-cut. Clinical judgment and experience are seldom subjected to a heavier responsibility than under these circumstances, for the patient's life rests on the decision. Furthermore, the improper use of these methods always increases the death rate, as Boyce has pointed out; to their unwise use he attributes at least part of the increased mortality in his series as compared with the series from the same institution reported by Moss three years before.

The various technical procedures which may be necessary to relieve intestinal obstruction cover almost the entire range of abdominal surgery. Obviously, they cannot be discussed here, but certain general principles may be mentioned. One such consideration is the impropriety of trying to do any type of intestinal anastomosis in the face of acute obstruction of any duration, when the state of the bowel wall is such that there is no prospect of a successful suture line. Under such circumstances the procedure of choice is double-barreled enterostomy, with the formation of a spur, or, if the patient's condition is critical, exteriorization of the bowel.

No expectation of drainage is justified in a bowel distended and paralyzed by long-standing obstruction. Nevertheless, enterostomy is sometimes a life-saving procedure and it should also be pointed out that the disrepute into which this operation has fallen is at least partially explained by the desperate nature of the work it is usually called upon to do. Both Roscoe Graham and Rankin advise blind cecostomy for acute obstruction caused by carcinoma of the large bowel.

Opinion is divided as to whether inhalation or spinal anesthesia is the better in intestinal obstruction, and there is something to be said for both sides of the argument.

POSTOPERATIVE THERAPY

Postoperative therapy is conducted along the same general lines as preoperative therapy, that is, the prophylactic or therapeutic management of shock, the administration of fluids, and the rehabilitation of the bowel wall. Infusion, transfusion, oxygen, nasal suction, the Miller-Abbott tube, and various forms of heat are used as necessary. Fluids should be administered according to the need of the particular case, which is most easily estimated as the amount necessary to maintain a normal output (between 700 and 1200 cc. daily). It may be necessary to open the bowel loop immediately after operation, but in low grade obstruction, particularly in the large bowel, it is often possible to delay until peritoneal adhesions have formed.

THE PROBLEM OF INTESTINAL OBSTRUCTION

No attempt has been made in this paper to review the literature of intestinal obstruction, but it should be pointed out that studies of reported series of cases are valuable for several reasons. One is that from all of them the risks of too radical surgery can be learned. Another is the very high level at which the mortality of intestinal obstruction still persists. Some comfort can be derived from a study of such comparative figures as those reported by Miller, Moss and Boyce from the New Orleans Charity Hospital, but a mortality of more than 36 per cent (Boyce) or even of more than 31 per cent (Moss) certainly leaves no room for complacency.

Finally, the study of all reported series invariably shows that the most important single factor in intestinal obstruction is the time element. Without exception, the mortality in this condition mounts hour by hour. Boyce's study is typical of all others in this respect, in that the mortality in patients seen within 48 hours was less than half (20 per cent), the mortality in patients seen after that period (54.1 per cent). The average mortality for all cases probably is somewhere between 25 and 50 per cent. Such figures are a challenge to every practising physician, and the only way to answer it is to reduce the interval between the onset of symptoms and the time of operation. The nature of the condition is such that a minimal death rate probably can never be achieved, but attention to the controllable time factor will surely reduce the mortality at least to the irreducible minimum, which is usually stated to be in the neighborhood of 10 per cent.

REFERENCES

Abbott, W. O.: Fluid and nutritional maintenance by use of intestinal tube. Ann. Surg. 112:584-593, October, 1940.

Abbott, W. O., and Johnston, C. G.: Intubation studies of the human small intestine. X. A non-surgical method of treating, localizing and diagnosing the nature of obstructive lesions. Surg., Gynec. & Obst. 66:691-697, April, 1938.

Boland, F. K.: Acute intestinal obstruction in the negro. Review of 347 cases. Ann. Surg. 98:698-703, October, 1933.

Boyce, F. F., and McFetridge, E. M.: Acute intestinal obstruction. A comparative analysis of three series totaling 715 cases. South. Surgeon 6:109-125, April, 1937.

Brunn, H., and Levitin, J.: Roentgenologic study of intestinal obstruction. Surg., Gynec. & Obst. 70:914-921, May, 1940.

Dragstedt, C. A.: Some pharmacological considerations of intestinal obstruction. Illinois M. J. 74:313-315, October, 1938.

Elman, R.: The danger of sudden deflation of acutely distended bowel in late low intestinal obstruction. Am. J. Surg. 26:438-446, December, 1934.

Fine, J., Fuchs, F., and Gendel, S.: Changes in plasma volume due to decompression of distended small intestine. Arch. Surg. 40:710-716, April, 1940.

Fine, J., and Gendel, S.: Plasma transfusion in experimental intestinal obstruction. Ann. Surg. 112:240-248, August, 1940. Correction ibid. 112:976, November, 1940.

Graham, R. R.: Cecostomy—indications and technique. Am. J. Surg. 46:135-142, October, 1939.

Miller, C. J.: A study of three hundred forty-three surgical cases of intestinal obstruction. Ann. Surg. 89:91-107, January, 1929.

Moss, W., and McFetridge, E. M.: Acute intestinal obstruction. A comparative study of 511 cases, with special reference to the lowered mortality achieved by modern methods of therapy. Ann. Surg. 100:158-166, July, 1934.

Scudder, J., Zwemer, R. L., and Whipple, A. O.: Acute intestinal obstruction. Evaluation of results in two thousand one hundred fifty cases; with detailed studies of twenty-five showing potassium as a toxic factor. Ann. Surg 107:161-197, February, 1938.

Rankin, F. W.: The value of cecostomy as a complementary and depressive operation. Ann. Surg. 110: 380-386, September, 1939.

Rosenfeld, L., and Fine, J.: The effect of breathing 95 per cent oxygen upon the intraluminal pressure occasioned by gaseous distention of the obstructed small intestine. Ann. Surg. 108:1012-1021, December, 1938.

Wangensteen, O. H.: The value of diagnostic criteria for the choice of therapeutic procedure in the management of acute intestinal obstruction; experimental and clinical observations.

Wohl, M. G., Burns, J. C., and Pfeiffer, G.: High intestinal obstruction in dog treated with extract of adrenal cortex. Proc. Soc. Exper. Biol. & Med. 36:549-551, May, 1937.

Acetarsone (Stovarsol) in the Treatment of Congenital Syphilis*

R. E. WILSON, M.D.
GREENWOOD, MISS.

THE MANY difficulties encountered in the treatment of syphilis in infants by the injection method are no doubt directly responsible for the inadequate treatment of many of these patients. In private practice many parents have been told of treatment given by mouth and often resent having their children stuck with a needle each week over a long period of time. As a result unless the treatment is given in a less painful way, it is not always carried out to a successful concluion.

Acetarsone (stovarsol) is a pentavalent arsenical containing about twenty-seven per cent arsenic. It is number 594 in Erlich's series and was synthetized about 1909. Because of the fact that Erlich believed the trivalent arsenical, arsphenamine, to be more effective and less dangerous, he did not try to develop acetarsone. As late as 1921 the drug was reinvestigated by French workers and found to be effective in the treatment of syphilis when administered by mouth.

Acetarsone is a white odorless and almost tasteless powder. It is stable at ordinary temperatures and contains about twenty-seven per cent arsenic. Neoarsphenamine contains twenty per cent and the old arsphenamine thirty-two per cent arsenic. It is marketed in this country in .05, .10, and .25 gram tablets. It went through the various experimental stages in the European clinics between 1921 and 1930.

During this period there was a great diversity of opinion regarding the optimal dose, the tendency being to give larger doses than were later found to be adequate. As a result numerous serious reactions were reported—some fatal. In 1930 Bratusch-Marrain[1] suggested the dosage method which is generally employed today, i.e. the amount of acetarsone in grams consumed during one course of nine weeks of treatment corresponds to the weight of the infant in kilograms. For example, an infant weighing five kilograms would receive five grams of acetarsone during one course of nine weeks. This is a more conservative dosage than was employed by earlier investigators and there were fewer reactions while the clinical results compared favorably. The toxic reactions noted by various observers are coryza, chills, fever, dermatitis, albuminuria, and adenitis.

In 1932 A. F. Abt and A. S. Traisman[2] reported a series of twenty-two congenitally syphilitic infants and children treated with acetarsone by mouth. The schedule of dosage employed was as follows: the first week, five gm. per kilogram of body weight daily; the second week, ten mg. per kilogram of body weight; the third week, fifteen mg. per kilogram of body weight; the fourth week, twenty mg. per kilogram of body weight. For the following five weeks the dosage was twenty mg. per kilogram of body weight daily. Thus the course consisted of sixty-three days of treatment. At the end of the course fifty-nine per cent of the twenty-two patients had negative serology. They concluded that acetarsone was an effective and rapidly acting anti-syphilitic remedy and that the peroral administration of acetarsone was the method of choice in the treatment of congenital syphilis. It was also noted that the patients coöperated better than those treated by other methods and there was a marked improvement in their general physical condition.

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A year later Traisman[3] reported further on a group of fifty-four patients treated in a similar manner following the first course by a rest period of six weeks and then repeating the course. The conclusions reached were similar. In 1935 Traisman[4] reported further on the use of the drug in the treatment of congenital syphilis in sixty-five children. In this study he divided the children according to age groups. Twenty were infants under one year of age, twenty-two were children between one and six years and twenty-two were children between six and twelve years of age. He also studied the effect of acetarsone on bone lesions, on the blood, and on the urine. The clinical results were very gratifying. The infants and children gained weight, appetite improved, color improved, and the clinical symptoms disappeared rapidly. His final conclusions were that acetarsone is the ideal drug for the oral treatment of congenital syphilis in the infant. In older children it is also of great value.

Arena and Gay[5], reporting in 1936 on a series of thirty-two children between the ages of birth and eleven years suffering from congenital syphilis treated with acetarsone, concluded that it is an effective and convenient drug. They state that the medication is easily administered and controlled and has many advantages over the previous therapy of congenital syphilis which required intravenous or intramuscular injections weekly over a period of two years.

Davidson[6], et al, of Childrens' Hospital, Winnipeg, Canada, states that acetarsone given by mouth is a valuable method of treating congenital syphilis. Pillsbury and Perlman[7], of Philadelphia, state that acetarsone is an active antisyphilitic drug, but that it is inferior to arsphenamine and bismuth. They follow the dosage suggested by Maxwell and Glaser[8], which is much higher than the dosage used by Traisman. There are numerous other investigations of acetarsone in the treatment of congenital syphilis reported in the American literature of Coppolini[9], Yampolsky[10], Friedman[11], Mitchell[12], Lyon[13], and others.

There is general agreement on the following points: 1. Acetarsone is an effective antisyphilitic drug. 2. It is conveniently and easily administered. 3. The younger the patient, the more satisfactory the results both clinically and serologically. 4. Unfavorable reactions to acetarsone therapy do occur.

There is disagreement among clinicians on the following points: 1. Dosage—That there is a wide divergence of opinion as to the optimal amount of acetarsone to be administered is evidenced by the fact that Nedelman advocated the administration of fifty grams of the drug in one course of ninety days' duration in a series of eighteen infants under one year of age. On the other hand, Bratusch-Marrain would give a year-old infant weighing about twenty-one pounds ten and one-half grams over a period of sixty-three days. The clinical response with the smaller dose is essentially the same as with the larger dose. The untoward reactions are very much less.

2. A second point of apparent disagreement is the number of days that active treatment should prevail before a rest period and the length of the rest period. There is further agreement that at the first indication of an unfavorable reaction to the drug, it should be stopped and treatment started again with minimal dosage.

In summary, one is justified in the following conclusions with reference to acetarsone therapy in congenital syphilis:

1. It is more easily administered than any other medication of recognized efficacy.

2. The clinical response is better than that of drugs administered intravenously or intramuscularly and the serological response compares favorably with that of the drugs by vein or muscle.

3. The coöperation of parents and patients is better than with the more painful methods of treatment and therefore treatment is more thorough.

4. The unfavorable reactions when properly graduated dosage is given, are almost negligible and easily controlled.

5. The expense incident to treatment is comparatively negligible.

REFERENCES

1. Bratusch-Marrain, A.: Arch. F. Kinderh. 92:26 (Nov. 28) 1930.
2. Abt, A. F. and Traisman, A. S.: J. Pediat. 1:172 (Aug.) 1932.
3. Traisman, A. S.: Am. J. Dis. Child. 46:1027 (Nov.) 1933.
4. Traisman, .A. S.: Pedia. 7:495 (Oct.) 1935.
5. Arena, J. M. and Gay, C. H.: Sou. Med. and Surg.

98:73 (Feb.) 1936.
6. Davidson. A. M. and Brit. A. R.: Canad. M. A. J. 34:33 (Jan.) 1936.
7 Pillsbury, D. M. and Perlman. H. H.: Archives of Der. and Syph. 39:969 (June) 1939.
8. Maxwell, C. H., Jr. and Glaser, J.: Am. J. Dis. Child. 45:1461 (June) 1932.
9. Coppolino, John F.: Am. J. Dis. Child. 48:272 (Aug.) 1934.
10. Yampolsky, Joseph: Am. J. Dis. Child. 48:81 (July) 1934.
11. Friedman, C. F.: Am. J. Dis. Child. 48:548 (Sept.) 1934.
12. Mitchell, H. S.: J. Canadian M. A. 33:377 (Oct.) 1935.
13. Lyon, R. A. and Seymour. Miner: J. Pediat. 15: 13, 1939.
14. Nedelman, E. and Jaharb, F.: Kenderh. 134:89 (Dec.) 1931.

DISCUSSION

DR. G. LAMAR ARRINGTON (Meridian): When one realizes that 16⅔% of the men that have been drafted have been rejected for syphilis, one sees the importance of starting the treatment in early infancy. Of course, some doctors claim they have never had any cases of congenital syphilis. My contention is they do not look for it carefully, for it is often found in families not ordinarily suspected of it. In all doubtful cases, a blood Wassermann, an x-ray, and perhaps a spinal fluid test should be taken. Then the doctor will pick up a lot of cases that are difficult to diagnose—babies who do not gain, who cry, especially at night, and who require a lot of handling.

The most important thing about stovarsol is that it takes less time than other drugs. Tell a mother that she will have to bring her child for at least 150 weeks—it's hard to get them to take three typhoid shots—and there is a problem. I do not know how to answer it. I try to be reasonable in my charges to them, but just the idea of 150 weeks scares them. We don't cure them in six or eight days like we used to be told we could. We know now, because we can look at our overcrowded mental hospitals, due no doubt to our ignorance and negligence. So stovarsol lets us give them something and see them, as Dr. Wilson suggested, once a month, or perhaps oftener. I like to see them at least the second week, and I use grains.

Dr. Yampolsky, in Atlanta, has probably treated more syphilis in the South than any man that I know. He has a pretty good rule and it is very simple—⅓ gr. per kilogram the first week; 1/7 the second week, ¼ the third week, and then ⅓ the fourth, fifth, sixth, etc. weeks, given in a series of 9 weeks. I think that is the most practicable plan. If we stamp out syphilis we must be practical, reasonable, and persevering because no matter who the patient—upper, lower or middle class—he does not always come when you tell him to, and it is up to the physician to use all his influence and persuasion to get him to stay with him. The patient must also have confidence in his doctor. If we work together, by the time we have the next war, our percentage of syphilis will be less.

DR. HARVEY F. GARRISON (Jackson): I am very glad that Dr. Wilson had forethought enough to bring this subject to the attention of the practitioners of this state. Oftentimes when we are asked to read a paper before a medical section, we are at a loss to know what subject to use, but I think that his choice of a subject at this time is very timely.

All of us who are doing children's work are trying to carry out this method of treatment for reasons largely that have been stated by both Dr. Wilson and Dr. Arrington.

We often see, and regret to see, these little fellows coming into our offices looking as though they have congenital syphilis, then on examination, after we put them down over our pillows and get a Wassermann from their neck vein, we find suspicion verified. I am reminded again to urge that every practitioner of medicine by all means take a Wassermann on every pregnant woman when she first comes to him. It is surprising to see even the best practitioners we have in Mississippi fail to do this occasionally. A woman will come in with her newborn baby with congenital syphilis. When asked who took care of her, she will say Dr. So and So, who is a very fine physician. Then you call him up and ask if he took a Wassermann on that women and he will say "Yes, I think so—I always do," and you say, "I wish you would look up your records and let me know about it." And a little bit later he will call you and tell you, "I am sorry, but I did not do it—I overlooked it." Think what that meant to that unborn baby. I am treating a number of them—have four on hand now—and I am treating them just like Dr. Wilson suggested. The only thing that I wish to impress aside from what he has already said, and to emphasize every word he and Dr. Arrington said, is the fact that we should be careful to treat the mother. The best time on earth to treat congenital syphilis in the baby is before it is born.

DR. WILSON (closing): Just this with reference to what Dr. Arrington said about the dosage that he follows. It does run out to be considerably larger than the dose I suggested in the patients I am treating. It goes to prove for one thing that stovarsol after all is a comparatively safe drug. Of course, there are some individuals who are sensitive to arsenic in any form, but they are rather rare and they are no more sensitive to it by mouth than they would be by needle, and by starting with small doses, if they are sensitive, we run less risk than we probably would run if we gave it intravenously. There is such variation in the amount given by different workers that I feel if there be a different dosage established, the result would be still more gratifying. I did not bring in the point that Dr. Garrison did, but I think we all agree with him that the time to treat congenital syphilis is to treat the baby before he arrives and that certainly is in the hands of the men who are doing obstetrics. Thank you.

Modern Trends in Treatment of Acute Intestinal Obstruction*

R. D. KIRK, JR., M.D.
TUPELO, MISS.

THE MODERN surgeon should feel justly proud of the advances made in the treatment of acute intestinal obstruction in the past ten years. I know of no other field of surgery which has made such a rapid stride. Various surgical centers have reduced their mortality rates by at least fifty per cent. Dr. Whipple, of the Presbyterian Hospital in New York, reports a decrease of 36.4% in the last ten-year period. The total number of deaths for our entire state from intestinal obstruction in 1930 was 219. In 1940 it was 128, a fraction under 50%. This, although inconclusive, reflects a great improvement in our treatment. The operative treatment itself has changed very little and we must therefore ascribe it to more adequate preoperative and postoperative treatment. It is true, that restoration of body fluids and the salt balance which has been championed so ably by Hayden and Orr, has attributed largely to this great improvement, but I am sure we all give credit to most of this advance to the work which has been popularized by Wangensteen, Miller and Abbott, in intestinal intubation. To my mind the Wangensteen suction is the greatest boon to the surgeon that has occurred in the past decade.

Before discussing the treatment, it is well that we should first consider the diagnosis, for without an early diagnosis our mortality rate will be high in spite of adequate and proper treatment. The symptoms of obstruction—cramp-like abdominal pain, nausea, vomiting, and inability to pass gas or feces, are too well known to warrant extended discussion, but I would like to stress once more the importance of the relationship of the pain to the peristaltic sounds. It is the constant and intimate relationship between noise and pain which is significant. The presence of intestinal colic is established by the occurrence of intestinal borborygmi, heard with the stethescope at the height of pain. No other acute lesion of the abdomen is characterized by such a pathognomonic finding. To interpret the symptoms, distention and vomiting correctly, it is essential that one should always remember the significance of the ileocecal sphincter and valve. This valve-like structure prevents the regurgitation of the colonic contents back into the small bowel, yet it permits free passage of gas and fluid from the small bowel into the large. Hence, vomiting in small bowel obstruction is usually copious and frequent. In colonic obstruction it may be absent altogether, in spite of enormous distention. Enemas have long been used as a diagnostic aid. The results are often misleading and continued use of them in the presence of an obstruction is injurious. The scout film, with patient in supine position, often gives valuable aid as to the presence and location of the obstruction. It is essential to know the location of the obstruction in order to plan the operative procedure intelligently. The visualization of gas in the small intestine of the adult is distinctly unusual and ordinarily indicates intestinal stasis. Gas is only normally visualized where food or intestinal contents remain for some time. This rule does not hold true for infants under three years of age. Fluid levels in the small bowel cannot be visualized with patient in supine position and occur so rarely they are seldom looked for in acute cases. The x-ray findings should always be closely correlated with the clinical findings. One of the most important decisions we have to make after we have arrived at a diagnosis of acute intestinal obstruction is, are we dealing with a simple obstruction or one with strangulation and decay of the bowel. The first we can temporize with and the second we must treat heroically, for obvious reasons. To make this differentiation is not always an easy task. Generally speaking, the patient with a strangulating lesion looks much sicker. He has a "knocked out" appearance. He is in shock and illness is of shorter duration. The abdomen shows signs of peritoneal irritation, due to the escape of sanguinous fluid into the peritoneal cavity. In obstructions presenting only interference with the intestinal continuity, abdominal tenderness and rigidity are usually absent; whereas, in the strangulated type, we have marked tenderness and a definite rebound sign. The leukocyte count is usually higher in strangulating lesions. If the bowel becomes strangulated in a previously existing inflammatory process, the diagnosis is most difficult, and we must be guided solely by x-ray findings, distention, vomiting, etc.

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TREATMENT

The ideal treatment of intestinal obstruction is surgical removal of the cause, provided the condition of the patient and his surroundings permit such an undertaking. Unfortunately, they are rarely in good operative condition and I have therefore divided the treatment into three phases.

1. The preoperative
2. The operative
3. The postoperative

There are several factors which should govern the preoperative treatment, however, and basic principles which should be applied to all cases of obstructions. It should be an invariable rule, to replace the fluid loss before the operation. In cases of suspected strangulation and obstructions of long standing one should include blood transfusions. The degree of dehydration can be rapidly estimated clinically by the facial expression, dryness of buccal mucosa and tongue, extreme thirst, pulse rate, etc. Laboratory proof of dehydration is shown by high concentration of urine, high N. P. N., and low blood chlorides, if due to vomiting. The average patient will require at least two quarts of fluids intravenously before operative procedures are instituted. It is also imperative that decompression of the stomach should be obtained prior to operation and an indwelling tube left in the stomach during the operation to prevent aspiration. Other symptoms, such as shock, should be treated by dry or moist heat. Stimulants should be given according to indications. Oftentimes, the patient is so greatly improved by these preliminary procedures, he is lulled into a state of well being and tries to forestall the operation. It is well to warn the relatives of this anticipated improvement in order to prevent delaying operative procedures, which may seem to them unnecessary.

The choice of an anesthetic should be determined by the age of the patient, physical status, etc. Since the advent of sodium pentothal I have been using that agent almost exclusively. Spinal anesthesia should be used on selected cases. In simple obstructions the simplest operative procedure is the safest. The most serious bungling in the management of simple obstructions results from attempts to perform the operation of election, when a simple decompression operation would suffice. This is particularly true of obstructions of the large bowel. If there is no definite indication, as to the location of obstruction, a right rectus incision made near the midline will most frequently prove satisfactory. The majority of obstructions of the small bowel are in the distal portion of the ileum. Upon entering the abdomen, the operation should proceed in a gentle and orderly manner. Extensive handling of the bowel is not well tolerated and should be studiously avoided. Inspection should begin at the ileocecal valve when practicable. If collapsed, it should be followed retrogradely to the obstructing lesion which is as a rule single. The division of adhesions, which have no part in the obstruction, is useless, time consuming, and may well lead to perforation of the friable gut. When a gangrenous loop of bowel is encountered it must be resected or exteriorized to prevent a peritonitis. My own personal experience has been very disappointing with exteriorization of the small bowel with subsequent double gun barrel fistula. With the proper preliminary treatment of blood transfusions, fluids, and deflation of the bowel, I prefer primary resection and anastamosis. Factors in the high mortality of the exteriorizing operations are: 1. infections of the abdominal wound and peritoneum, 2. digestion of the abdominal wall, 3. secondary operations necessary for closure, 4. exhaustion from loss of intestinal contents. When a resection is made it should be done with strict asepsis. Contamination or spillage is synonymous with failure. The popularity of enterostomies has waned in the past ten years in about the same proportion as the drop in the death rate of acute intestinal obstruction. In carefully selected cases it is still a life saver. These cases fall into a group classed as late simple obstructions and also those in which for some reason decompression cannot be secured by an internal tube. High jejunostomies should never be performed except for feeding purposes. After the cause of an obstruction has been found and removed, it is useless and harmful then to subject a patient to an enterostomy as was so often done a few years ago. Statistics show that this increases the mortality. The safety of an enterostomy as a surgical measure has been wrongfully emphasized in the past. Its limitations and complications are fast being realized.

The Wangensteen suction and the Miller-Abbott intubation techniques, have completely revolutionized the postoperative treatment. They are not only life saving measures, but add greatly to the comfort and smooth convalescence of the patients. The Levine tube, in a great majority of the cases, will suffice. If, however, distention persists, a Miller-Abbott tube should be inserted without delay. If an anastomosis has been performed, it is much better to use the Miller-Abbott tube to insure absolute decompression of the bowel and thus protect the suture line. The indwelling tube is also of value in testing the return of bowel function. It may be clamped at intervals and liquids given to ascertain the tolerance of the bowel. Gastro-duodenal drainage should be continued until it is evident from the character of the fluid obtained, from the disappearance of distention, and from the evacuation per rectum of feces or gas, that normal intestinal activity has returned. Repeated enemas and drugs intended to promote peristalsis are usually uncalled for. The same is true for purgatives until the decompressed intestine regains its tone and normal motility. Oschner, and others, doubt the efficacy of pitressin, prostigmin, etc., in these cases. The water and salt balance must be established and maintained. In the first twenty-four hours this may require as much as 7,000 cc. A rough estimate can be made by the urinary output, the normal being 50 ounces per day. The average patient will require 3½ quarts of a 5% glucose in normal saline to maintain the proper balance. It should not be forgotten that hypertonic solutions themselves given in excess produce dehydration. Blood transfusions should be given if the case is protracted or if there is a strangulation of the bowel. With the abdominal distention, changes in the blood composition, the vital capacity of the lungs and oxygen carrying capacity of the blood, are decreased. It is therefore, as advocated by the Mayo group, good therapy to administer oxygen to the critically ill patients. Heat cabinets are recommended to combat shock. Spinal anesthesias, to relieve distention, are only mentioned to be condemned, as they are ineffective and dangerous.

There is a special group which Oschner designates as the physiological—the dreaded acute paralytic ileus—which yields admirably to the Miller-Abbott technique. The so-called "plastic postoperative obstructions," that used to cause so much grief, can now be tided over by intestinal drainage and suction, until the bowel releases itself and regains its function.

Conclusions

I would like to re-emphasize the following points:

1. Borborygmus, synchronous with intestinal cramps, usually indicates obstruction of the bowel.

2. Abdominal tenderness and rigidity with a rebound sign, indicates a strangulating lesion.

3. The visualization of gas in the small bowel of an adult is synonymous with obstruction.

4. The dehydrated patient is a poor surgical risk, and operation should always be deferred until fluid loss is overcome and decompression of the bowel at least attempted.

5. The secret of a successful operation often lies within its simplicity.

6. The use of the Wangensteen suction or the Miller-Abbott tube, enables the patient to be improved physically and to be changed from a poor to a good surgical risk. Postoperative, it adds to the patient's comfort by relief of distention and ability to take fluids by mouth. To avoid pitfalls one must be acquainted with its limitations.

DISCUSSION

DR. J. C. CULLEY (Oxford): Any discussion of Dr. Kirk's excellent paper will, of course, be superfluous. He has thoroughly covered the subject and all I can hope to do is to emphasize a few of the most important points.

First, I would mention the diagnosis, and especially early diagnosis is necessary for a low mortality. I have been more or less surprised in looking over the literature lately to find such a high mortality rate in intestinal obstruction. In the A. M. A. Journal of October 26, 1940, an article from the Mayo Clinic reports one hundred and sixty-six cases — one hundred and thirty-three of simple obstruction and thirty-three strangulation. The mortality in the first group was 21.8% while in the second group it was 24.2%. Our essayist does not give us any statistics, but within the past two years we have had seventeen cases of obstruction. Three were of the colon, the others in the small bowel. Two were strangulated inguinal hernias, one intussusception, one volvulus of the sigmoid; two were carcinomas of the colon and twelve were due to postoperative adhesions, foreign bodies, etc. In this series we had two deaths—a mortality of 12.5%.

To prove the old adage that you can't always tell what is in the barn until you open the door, I would like quickly to relate one interesting case of a foreign body causing intestinal obstruction. This was a feeble-minded boy who was subject to epileptiform attacks. While taking a bath he had a slight attack and on account of the noise he made his mother was attracted to the bathroom. She found him apparently suffering with his stomach. She was unable to obtain any satisfactory history except that he had a stomach ache. The following day he was brought to the hospital and because of vomiting, distention of the abdomen, and failure to get his bowels to move in spite of enemas, we operated immediately. About six inches from the ileocecal valve was found an object the length and circumference of a shot gun shell. The ileum proximal to the mass was markedly distended. With very little difficulty we managed to force the mass along the distal portion through the ileocecal valve into the colon and closed the abdominal wound. Vomiting ceased. Within forty-eight hours he was given a large dose of castor oil. Within due time he passed a regular size rubber bath sponge 4 inches by 2½ inches by 1½ inches. I think this case illustrates the necessity of early diagnosis.

Secondly, a careful history is extremely important and if possible the patient should tell his own story. Inspect the abdomen for scars from previous operations. When a patient leaves our hospital we tell him, "If you have an acute pain in your abdomen and become nauseated, send for a physician immediately and keep in mind that you might have an obstruction. Do not take a purgative." One of the first steps in the treatment of intestinal obstruction is prevention by 1. amfetin in the peritoneal cavity, 2. gentle handling of the tissues, 3. caution against drastic purgatives.

If you want a low mortality don't let the family force you into too early operative interference. However, if conservative treatment does not relieve the patient within twelve to twenty-four hours, operation should be performed. As our essayist has pointed out, the use of the duodenal tube of Miller-Abbot and the Wangansteen suction has revolutionized the treatment of obstruction. When he sent me a copy of his paper he asked that I stress the technique of the Miller-Abbott tube. We have in the past had excellent results in decompressing the bowel by using simply a Levine or an Einhorn tube attached to the Wangansteen apparatus. There is on the market an excellent apparatus on wheels which has on it a two-arm elevated shaft for suspension of transfusions and saline or glucose solutions. The Miller-Abbott tube is one tube with two lumens—one large for withdrawing the bowel contents and a small one for inflating a thin rubber bag or balloon on the end of the tube. The air is drawn from the bulb, the tube lubricated with K. Y. jelly. One nares is cocainized with 4% cocaine and the tube passed to the nasopharynx. Then as the patient is instructed to drink water through a glass tube each time he swallows the tube is pushed. As the first mark (45 cm.) disappears in the nose the tip enters the stomach and suction is begun and maintained throughout. The patient is then propped up on his right side and the tube passed inch by inch until the third mark (75 cm.) reaches the nose. Now a glass syringe is connected to the small lumen tube and 10 cc. of air injected. If a sense of resistance is felt, leave the air in the balloon and wait twenty minutes. If resistance can still be felt, inject 15 more cc. of air, clamp the tube and have the patient to swallow six inches of tube every half hour. If no resistance is felt when syringe is first applied, wait thirty minutes and try again. Of course we all know that dehydration must be overcome and the chlorides replaced.

As for anesthetics, I think spinal is the one of choice, especially if we have been unable completely to decompress the bowel. However, there are some contraindications to its use, mainly a very low or a very high blood pressure. So far, I have found no contraindications to pentothal sodium except in the very young and a patient who has a full stomach.

Dr. Oschner to the contrary, we think we get good results in the use of prostigmin and keeping the patient quiet with morphine.

In closing this discussion let me again congratulate Dr. Kirk on his timely paper, and to plead for a closer understanding between the practitioner and the surgeon. Delay is today keeping the mortality rate from appendicitis too high. The same is true with intestinal obstruction. Intubation and decompression plus combatting fluid loss has changed the picture considerably, but the mortality rate is unnecessarily too high. Just as in appendicitis, early diagnosis and institution of therapy, whether conservative or radical before the patient becomes dehydrated and a poor surgical risk, is tantamount to a low mortality. Again to quote the article by Schlicke and others. "Peritonitis was the most common cause of death." Unless resections are done peritonitis should not develop. Unless delay has entered into the picture resections should not be necessary except in carcinomas.

DR. A. STREET (Vicksburg): I want to compliment Dr. Kirk on his able presentation of this important subject. He has stated that the treatment of acute mechanical intestinal obstruction is surgical and operation should be done just as soon as preoperative reconstructive measures can be carried out. I heartily endorse this attitude, and feel that preoperative measures should not delay operation more than a few hours.

In making the diagnosis, intestinal obstruction may be mechanical, paralytic or adynamic; it may be located high or low in the intestinal tract. It may be partial or complete, with or without vascular strangulation, and may be associated with acute inflammatory processes, with chronic diseases such as tuberculous peritonitis, and with neoplasms of the intestines or of structures adjacent to the intestines. One common type of obstruction in children, intussusception, is one of the easiest to diagnose preoperatively.

It is not always possible to make an accurate preoperative diagnosis when dealing with patients showing acute abdominal symptoms. The history, physical examination, laboratory data and x-ray findings when put together and studied by an experienced doctor, however, will lead to a fairly correct diagnosis in a good percentage of patients. If symptoms are urgent, too much quibbling about the diagnosis should not be allowed unduly to delay surgical treatment.

In doing roentgenographic examination of fluid levels in the intestines we usually assist the patient to a sitting position, with the feet hanging over the side of the bed. Films of the abdomen are then made in this position, using a portable x-ray machine.

We learned of the Matas method of continuous gastric drainage and irrigation by nasal intubation with duodenal tube, and have used it since a few years previous to the time Dr. Matas published it in 1924. (1) We have found the use of the duodenal tube, indwelling in the stomach, as suggested by Dr. Matas, of great value, and continue to use it, and do not add to it the continuous suction bottles suggested by Wangansteen, when employing gastric drainage. However, we do use the continuous suction apparatus when employing the Miller-Abbott tube. I am sure the addition of the use of the Miller-Abbott tube to treatment measures has enabled us to save the lives of some patients that otherwise would have been lost. The passage of this tube requires experience and technical ability, and if the responsibility of intestinal intubation is passed on to an inexperienced person there is little prospect of success.

After mechanical obstruction has been relieved it has been our experience that the parasympathetic-like action of prostigmin is a worth while and dependable aid both in promoting emptying of the bowel and of the urinary bladder.

In dealing with patients having acute intestinal obstruction we should make full use of our diagnostic and therapeutic facilities, but I would like to emphasize that acute mechanical intestinal obstruction is a surgical condition, and to suggest caution in allowing anything unduly to delay operative treatment.

REFERENCE

(1) *Matas, Rudolph: The Continuous Intravenous Drip, with Remarks on the Value of Continued Gastric Drainage and Irrigation by Nasal Intubation with Gastro-Duodenal Tube (Jutte) in Surgical Practice. Ann. Surg.* 79:643 (*May*) 1924.

Carcinoma of the Ovary*

H. R. SHANDS, M.D., R. C. O'FERRALL, M.D.
AND R. LEE CLARK, JR., M.D.
JACKSON, MISS.

OVARIAN TUMORS are one of the frequent neoplastic conditions encountered in the practice of medicine. Certainly everyone who includes abdominal surgery in his repertoire of therapy should have a working knowledge of the benign and malignant conditions encountered in the ovary. It is our purpose to present the experience obtained from a general surgical practice as regards the incidence of occurrence of ovarian malignancies with especial emphasis on the age distribution. Only our private patients operated at the Mississippi Baptist Hospital in the past seventeen years are included in this paper. The patients treated for ovarian tumor in the Mississippi Charity Hospital and in out-of-town consultations by us could not be included because of inadequate records. A few simple and pertinent rules will be formulated from these studies, which we believe will dictate the advice to be given to an individual patient as regards her subsequent treatment. The classification of ovarian tumors used by Cutler and Buschke is concise and inclusive and is adequate for a surgical review of ovarian neoplasms. (Table 1.)

TABLE I
CLASSIFICATION OF OVARIAN TUMORS

	BENIGN	MALIGNANT
A. Nonproliferating..........	Follicle cyst Corpus luteum cyst	
B. Proliferating tumors 1. Epithelial tumors.......	Pseudomucinous cystoma Papillary serous cystoma	Pseudomucinous cystocarcinoma Papillary serous cystocarcinoma Solid carcinoma Special solid types: Granulosa cell Arrhenoblastoma Seminoma
2. Tmbryonal tumors.....	Dermoid cyst (cystic) Teratoma (solid)	Teratoma Chorionepithelioma
2. Embryonal tumors.....	Endometrioma (chocolate cyst)	Secondary adenocarcinoma of the gastro-intestinal tract. (Krukenberg tumor) Adenocarcinoma secondary to primary carcinoma of the genital tract
4. Connective tissue tumors	Fibroma Fibromyoma	Sarcoma Endothelioma Perithelioma

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The incidence of occurrence of malignancies in any group of ovarian neoplasms varies widely. However, it is very high and increases greatly with each decade of life beyond thirty years. Lynch[2] in a group of 302 ovarian neoplasms found 110, or 30 per cent, to be carcinomatous in nature. May[3] found, in a review of the literature, that malignant degeneration of ovarian tumors varied with the different authors from 11.7 per cent to 24.5 per cent, while the average was 20.0 per cent. That is, that one out of every five cases of ovarian tumors was malignant.

Counseller, in discussing the age distribution of patients with ovarian malignancies, stated that it was uncommon to find a carcinoma of the ovary in a woman less than thirty-five years of age, this being a malady chiefly of the fifth decade of life, and beyond. In our series, the patient's age, by decades in which they occurred, of both benign and malignant lesions, are recorded in Table II.

TABLE II

250 OVARIAN NEOPLASMS

	Benign Cystomas		Malignant Tumors	
Age Groups	Number	Per Cent	Number	Per Cent
1 - 19	15	94.0	1	6.0
20 - 29	97	98.8	1	1.2
30 - 39	65	95.1	3	4.9
40 - 49	36	85.7	6	14.3
50 - 59	5	35.5	9	64.5
60 - 69	2	25.0	6	75.0
70 - 79	1	33.3	2	66.6
80 - 89		0	1	100
Totals	221	88.4	2.9	11.6

In our group of 250 patients with ovarian neoplasms, 29, or 11.6 per cent, had growths that were carcinomatous in nature. The remaining 221 patients were found to have benign cystic neoplasms of the ovary. This figure coincides closely with that reported by Bell and Datnow[4] since they encountered 12 per cent malignant changes in 232 cases of cystadenoma.

The significant increase in the percentage of tumors that are malignant in the 40- and 50-year groups may be noted in Table III. An ovarian tumor encountered while examining a woman whose age is over forty years has one chance in three of being malignant. If the patient is over fifty years of age we have found the tumor to be carcinomatous in two out of three instances. In no other group of malignant tumors is a more gratifying result to be obtained, when an early diagnosis is made and proper therapy instituted. Therefore, it would appear logical to suggest that every woman beyond forty years of age should have a yearly pelvic examination by her family physician or a gynecologist.

It will be noted (Table II) that cancer of the ovary does exist in the earlier decades of life. It behooves us, therefore, to investigate by laparotomy all ovarian tumors found during examination of a patient, regardless of her age. A period of observation preceding such an investigation may be fraught with danger to the patient and bring regrets to the surgeon, and it is to be absolutely condemned if the patient in question has attained or passed her fortieth year.

Treatment of carcinoma of the ovary should consist of radical surgery whenever possible. Roentgen ray and radium therapy should be utilized as an adjuvant as the particular condition encountered dictates. Given a particular patient, forty years of age or older, with an ovarian tumor, the procedure for her management under our case is:

(1) To recommend immediate surgical exploration.

(2) If a tumor of the ovary is encountered:
  a. Ovary is removed unruptured and pathologist's report requested immediately.
  b. Benign lesion, surgical procedure to be such as indicated.

(3) If a malignant neoplasm confined to ovary is encountered:
  a. Removal of all pelvic organs is the procedure of choice, even in the 50 per cent of patients in which the lesion is unilateral.
     Irradiation is used following surgery in those instances in which the carcinoma is a grade III or IV by Broaders'[6] classification.

(4) If a malignant neoplasm originating in the ovary but disseminated is encountered and if the patient's condition permits:
  a. The primary site of the carcinoma is removed along with as much of the remainder of the pelvic viscera as is possible.

b. Extensive irradiation is carried out following surgery in all instances.

(5) If malignant neoplasm of the ovary that is totally inoperable is encountered radiation therapy is given unless the patient is cachectic.

There are certain types of ovarian carcinoma that one is inclined to treat with conservative surgery in an attempt to conserve the reproductive function in the patient below forty years of age. These are tumors having a low grade of malignancy and occurring unilaterally. As a rule, these are the grade I cystic pseudomucinous carcinoma, the granulosa cell tumor, the arrhenoblastoma and the dysgerminoma. The latter occur very rarely. If simple excision of the involved ovary is decided upon, the other ovary must be carefully inspected to make certain that a similar process has not already begun.

The result of treatment of course depends upon the degree of advancement of the lesion at the time of surgery. This variation probably explains to some extent the marked diversity of results reported by various authors. Counseller[7] reports a series of 143 patients treated at the Mayo Clinic with surgical procedure alone; 65.4 per cent of them were living five or more years after treatment. One hundred and eighteen patients received intensive irradiation in addition to surgical treatment and of this number 50.5 per cent were living five or more years later. Thirty-six patients had extensive lesions and were suitable for irradiation only; 16.7 per cent of them lived five years or more after such treatment.

Meigs, reporting the experience at the Massachusetts General Hospital with 147 patients suffering from carcinoma of the ovary, was able to find only 24, or 16 per cent, living for five years after treatment and without demonstrable malignancy. However, there were many patients with inoperable lesions in this series.

For the hopelessly inoperable condition encountered in some patients, radiation therapy is justifiably indicated to decrease the formation of ascitic fluid and reduce pain. Also, some form of hope must be given the patient and her relatives if they are to be guarded from the quack and the fraud. Certainly the last word has not been written regarding the treatment of cancer, so it behooves us to try every logical means at our disposal. Sometimes a surprising result will be obtained in a seemingly hopeless case. Neill[8], reporting a group of 126 patients with far advanced carcinoma of the ovary that were treated by radiation therapy alone, found three patients apparently cured, one for two and one-half years, one for six years and one for ten years. An experience of our own with such a patient is encouraging to review:

CASE REPORT: Miss M. S., age 40, whose presenting symptom was a palpable tumor of the lower abdomen. On February 9, 1936, the abdomen was explored through a low midline incision. A large cystic, grade IV, adenocarcinoma of the left ovary was present and had become adherent to the adjacent pelvic viscera and pelvic wall, due to carcinomatous perforation and infiltration. As much of the tumor was removed as possible, but complete removal was out of the question as the whole left pelvis was studied with adherent malignant tissue. It was considered useless to remove the remaining pelvic viscera, but fifty milligrams of radium were placed in the midst of the remaining carcinoma as a last resort. It was screened by a hard rubber tube and the intestines were protected by vaseline gauze. All were removed in twenty-four hours. Postoperatively maximum doses of roentgen therapy were administered. A gain in weight of approximately thirty pounds and a steady return to normal health has been her subsequent course. A recent physical examination given during her five-year follow-up shows no evidence whatsoever of any continuation or recurrence of the original malignant process.

CONCLUSIONS

(1) A marked increase in the number of ovarian neoplasms that are malignant is noted in patients past forty years of age. An annual examination of all women in this age group is advocated for early diagnosis and curative therapy.

(2) Immediate operative investigation of exact nature of any ovarian tumor is urged.

(3) Removal of the primary, unruptured neoplasm is paramount. Its removal, regardless of the extent of the lesion, is a desired procedure when possible.

(4) A pathological interpretation before closure of the abdomen is essential for proper treatment.

(5) The patient is entitled to a conscientious use of all available methods of therapy.

TABLE III

AGE INCIDENCE—OVARIAN MALIGNANCIES

Age Groups	Benign Cystomas	Malignant Neoplasms	Per Cent of Malignancies
Under 40 Years	177	5	2.7
Between 40-50 Years	36	6	14.3
Over 50 Years	8	18	69.1

BIBLIOGRAPHY

1. Cutler, Max, and Buschke, Franz: Cancer, Its Diagnosis and Treatment, page 419 (W. D. Saunders Co.)
2. Lynch, Am. Journal of Obstetrics and Gynecology, Nov. 1936.
3. May, A.: Journal of Roentgenology, Mar., 1939.
4. Bell, W. B., and Datnow, M. M.: Ovarian Neoplasms, Am. Journal of Cancer, May, 1932, Vol. XVI, No. 3.
5. Counseller, V. S.: Tex. State Journal of Medicine, Dec., 1937.
6. Broaders, A. C.: The Grading of Carcinoma, Minn. Med. 8:726-730 (Dec.) 1925.
7. Counseller, V. S.: Am. Jour. of Surgery, Aug., 1940, pp. 284-289.
8. Neill, Wm. Jr.: So. Med. Jour., Vol. 25, 1932, p. 679.

DISCUSSION

DR. LAWRENCE W. LONG (Jackson): The discussion of ovarian neoplasms is a most interesting one to all abdominal surgeons. The diagnosis of the presence of a neoplasm is not a difficult one usually. However, I have seen cysts of the omentum, wandering fibroids, pseudocysts of the pancreas, all misdiagnosed as ovarian neoplasms and proved by laparotomy. The question of cysts of the lesser omental cavity sometimes caused by trauma, known as pseudocysts of the pancreas, oftentimes is very misleading.

The question of classification is well presented and it is sufficient to state that our worry on encountering an ovarian tumor is to know whether it is benign or malignant. It is usually solid or cystic, and it may be either epithelial in origin or arise from connective tissue, or both, as proved by pathologic section. A pathological section made by the frozen tissue method and reviewed at the time of operation, while the abdomen is still open, is of great value; but often an early malignant portion of a pseudomucinous cystadenoma may be overlooked. But, if the surgeon is particularly careful in removing en toto all of such cysts, then the early malignant degenerating portion is of no consequence.

It is interesting to emphasize again the importance of the fact that sarcomatous tumors of the ovary usually occur in early infancy and young womanhood, whereas carcinoma usually occurs during or after the menopause. Once an ovarian tumor is diagnosed it must be investigated *as soon as practicable* and prompt removal en toto is the treatment of choice. If bloody ascites is encountered in opening the abdomen, it is almost pathognomonic of a carcinoma when a tumor of the ovary is present. Unilateral pain and edema in the extremities, with irregular and nodular infiltration of the pelvis, rectum and bladder is the condition that is occasionally seen which is irremediable. Caution must be exercised in removing what often is apparently a simple cyst. I can cite one particular instance of what apparently was a simple cyst of the ovary, approximately four inches in diameter, which was ruptured by a heavy handed surgeon, and in five weeks bloody ascites was present with multiple carcinomatous inflammation of the peritoneum.

These conditions are relatively rare, but death will certainly follow in the wake of the clumsy or heavy handed surgeon who allows the spillage to occur. No more caution should be exercised on apparently a twisted ovarian cyst in its removal than should be exercised in the removal of what is apparently a simple cyst. If removed en toto it would offer excellent chances for a permanent cure, but if spilled in the abdominal cavity, it is certain and rapid death.

I agree with the authors on the necessity of complete enucleation of the pelvis when the diagnosis of a malignancy is made and the operation is done through a sufficiently large incision to remove the organs without the possibility of contamination; the intestines are well packed off and the abdominal cavity screened from the pelvis. The pathologist is a necessary adjunct at this point, but often may mislead by being overly cautious. I removed a pseudomucinous cystadenoma of the right ovary, approximately eight inches in diameter, in 1930, and was advised by the pathologist that carcinomatous degeneration was found in the hard tumor part of the base. It has now been eleven years with no recurrence and with no irradiation or x-ray therapy of any kind, because the tumor was removed completely and not even the attachment was left in place. However, I had an uneasy feeling for a time.

Let me reiterate the necessity for a sufficiently large incision to prevent the rupture of a malignant cyst in its removal and having the abdomen thoroughly isolated by packing from the pelvis. Aspirate the cyst in order to prevent its rupture if it is distended, remembering, if rupture does occur, the case is hopeless. I feel that as a matter of precaution that irradiation should be carried out postoperatively on cases of malignancy of the ovary, following the complete enucleation of the pelvis, and that it should be done very thoroughly.

Also, let me urge that with Krukenberg's tumors of the ovary careful search be made of the gastro-intestinal tract for evidences of malignancy there.

This timely subject, requiring great thought and deliberation and immediate surgery, with careful surgical procedure, should be brought to our attention more frequently.

Dr. E. T. Ellison (Greenville): This presentation makes it plain that ovarian tumors are frequent and are often malignant. It has also been stressed that treatment by surgical removal offers the best results. This is seconded by x-ray and radium.

In the last several years education of the laity along medical lines has caused people to consult their physician earlier particularly in regard to disorders of the reproductive system. Such patients present themselves often at the onset of the disease process and tax the clinical ingenuity of the physician to diagnose the process present. A careful evaluation of the classical symptoms of pelvic disease include pain, discharge and bleeding when added to a careful pelvic examination under the best office conditions.

The correct treatment of ovarian disorders, particularly tumors, should be approached in a most conservative manner during the childbearing age, so that needless surgical procedures can be avoided at this time. This will lead to less of the ovarian deficiency problems which are common to everyone's practice and are among the most trying of problems. It is therefore most important to make an unbiased and correct diagnosis of the type of ovarian tumor present in this aged woman because, as the authors have indicated, malignant conditions exist at this age along with the numerous follicular cysts and other small but nonpathogenic enlargements of the ovary.

A careful knowledge of the gross pathology of the ovary is essential to the surgeon who has opened the abdomen and must make a decision as to the proper procedure to carry out. His decision is greatly aided by the use of an immediate frozen section but this should not entirely replace his clinical examination of the tumor present at operation. It has been recently stressed by an author of a widely accepted pathological treatise on gynecology, that a diagnosis can be made only by history, finding of gross tumor and of microscopic examination

Rheumatic Fever in the Deep South*

W. W. LAKE, M.D.
PASS CHRISTIAN, MISS.

OUR FIRST thought upon hearing the title of this paper is to reflect mentally, "Rheumatic heart disease is a rarity here and does not concern us in the Deep South." Unfortunately such thoughts are erroneous. The fact is, we have seen and heard such dogma so frequently that its belief has become a fetish with us. We have said there is no rheumatic fever in the South, therefore we look for none. As a result we are closing our minds and our eyes much as the ostrich with his head buried in the sand, to the many minor patterns and subclinical cases presenting themselves to us in our practice. We are permitting these unfortunate individuals to go their way unrecognized and untreated with a progressive disease to an all-to-often certain death in their prime of life. I agree that it is not as common here as in the North. Still, I feel that it occurs sufficiently frequently to warrant having our attention called to some of its protean manifestations. If we but search for it, we shall find it far more often than is usually believed. We must not forget that rheumatic heart disease is the most frequent childhood heart ailment. If we exclude the congenital cardiac lesions, it is virtually the only other form of heart disease occurring among children and young adults. It is one of the most disastrous illnesses of youth, for it first disables for years and finally destroys when the youth is just ready to assume his place in society.

In an effort to emphasize that there is a significant amount of active rheumatic heart disease in the South and to lend some weight to my argument, I have gathered a few statistics. Their weakness is the weakness of all statistics involving a disease which is not reportable and in which many factors play a part.

TABLE 1. Statistics Reported by O. F. Hedley, Past Assistant Surgeon, U. S. P. H. S. on Northern and Western College Students in 12 Large Universities with Affiliated Medical Schools Reporting at Least 1500 Student Health Examinations.

University	Total No. Students Examined	No. Cases Rheumatic Heart Disease	Rate per 1000 Examinations
Stanford University	1,740	10	5.8
Yale University	5,027	23	4.6
University of Chicago	1,841	10	5.4
University of Illinois	4,662	41	8.8
University of Iowa	1,649	3	1.8
University of Michigan	3,485	19	5.5
University of Minnesota	5,028	5	1.0
University of Kansas	1,606	14	8.7
Syracuse University	1,746	9	5.0
Cornell University	5,840	46	7.9
Ohio State University	4,361	25	5.7
University of Wisconsin	3,620	40	11.0
Total	40,605	245	6.03

TABLE 2. Statistics Furnished in Personal Communication from O. F. Hedley on Southern College Students in Six Southern Colleges.

University	Total No. Students Examined	No. Cases Rheumatic Heart Disease	Rate per 1000 Examinations
University of Tennessee	2,397	20	8.3
University of Florida	779	4	5.2
Vanderbilt University	322	5	15.5
Texas A. & M.	1,730	11	6.4
Southern Methodist U.	1,137	19	16.7
Texas State College for Women	1,568	15	9.6
Total	7,933	74	9.3

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In Table 1 we have figures reported by Hedley of examinations on 40,605 Northern and Western university students from 12 universities associated with medical schools. Among these 40,605 students, 245 cases of rheumatic heart disease were found for a rate of 6.03 per 1000 examinations. In Table 2 we also have some figures furnished by Hedley of 7,933 Southern college students from 6 universities. Among these 7,933 students, 74 cases of rheumatic heart disease were found for a rate of 9.3 per 1000 examinations. Here we actually find a higher case rate among the Southern students than among the Northern students. However, these figures must be qualified by the fact that Hedley found a higher case rate in schools where a smaller number were examined. He also found a lower rate among students in colleges affiliated with medical schools. Nevertheless, allowing for these discrepancies, I believe these statistics help to emphasize the relative importance of rheumatic heart disease as a clinical entity in the South.

Strangely enough these figures bear a close relationship to those assembled at the autopsy table at New Orleans Charity Hospital. In Table 3 we see that in 6,946 routine autopsies performed at New Orleans Charity Hospital from 1935 through 1939 there were 35 cases of rheumatic heart disease discovered for a rate of 5.03 per 1000 autopsies.

TABLE 3. Cases of Rheumatic Heart Disease Found at Routine Autopsy at New Orleans Charity Hospital

Year	Total No. Autopsies	No. Cases Rheumatic Heart Disease	Rate per 1000 Autopsies
1935	1,347	5	3.7
1936	1,547	7	4.5
1937	1,246	6	4.8
1938	1,320	4	3.0
1939	1,486	13	8.7
	——	—	—
Total	6,946	35	5.03

The etiology of rheumatic carditis is intimately linked with that of acute rheumatic fever, for the former is merely the sequel to the latter. Many believe that the heart is involved to one degree or another in practically every case of rheumatic fever. It is most frequent in childhood, the majority of cases having their initial attack somewhere between the sixth and seventeenth year. Males are less frequently affected than females in a ratio of about 4 to 3. The disease tends to be more severe in the male. No race, unless it be the Chinese, enjoys any considerable immunity. The Southern negro is a frequent victim of the disease process. Climate plays a definite role in its incidence of rheumatic fever and rheumatic heart disease for it is more common in northern latitudes than in the southern. It is usually prevalent in regions subject to cold, rain and sudden fluctuations of temperature irrespective of geographical locations. In this area it is most prevalent from February to May. A decided tendency is exhibited for the rheumatic state to run in families. Questioning reveals that approximately 35% of patients with rheumatic heart disease have near relatives with a history of either rheumatic fever, rheumatic heart disease or chorea. In families with a positive history the recurrent attack rates are higher than in families with no rheumatic background. The disease is much more prevalent among the poorer and lower middle classes where malnutrition with avitaminosis predominates, and where crowding, poorer clothing and shelter with subsequent greater exposure to dampness and chilling is most frequent.

The exciting cause of rheumatic fever and hence of rheumatic heart disease is still unknown. For many years various strains of streptococci have been blamed, with particular emphasis focused on the hemolytic streptococci. In recent work the seemingly prophylactic value of sulfanilamide would appear to support the streptococcus theory. However, it is generally believed to be but one of several possible agents which may initiate the rheumatic state with subsequent cardiac involvement. Some investigators are still working on the hypothesis that an allergy or a virus may be a significant factor in the production of the disease complex. Regardless, the fact remains that most cases are intimately related to some recent streptococcal infection, usually of the upper respiratory tract, such as a tonsillitis, or occasionally scarlet fever.

The florid manifestations of acute rheumatic fever such as a severe migratory polyarthritis, myalgia or chorea are known to all of you. You are also all familiar with the advanced forms of rheumatic heart disease, such as mitral stenosis and aortic stenosis. However, today we are not concerned with these florid signs of the disease; rather we are concerned in calling to your attention the importance of the less commonly recognized signs and symptoms of the disease process. For they are not only the commoner signs of infection in children, but also in the subclinical type of disease seen in the South. The point I wish to emphasize today is that the rheumatic state in this section of the country often has a most insidiously masked onset without any florid manifestations, such as severe joint or muscle involvement. The patient may present himself to you with nothing more than the complaint of feeling unwell and of having sweats and a low-grade fever. In conjunction with this you may be told that the patient has been suffering from loss of appetite, and there has been no gain in weight, perhaps actually some loss. He appears underdeveloped and pale of countenance. There is a history of easy fatigue, a lack of energy, a loss of desire for previous physical activities. (He prefers to sit around or lie in bed.) Such a history is characteristic of any toxemia with a low-grade infection. Its cause may only be determined by a most careful inquiry. Often we may learn that the patient had some recent illness from which he never fully recovered. A thorough physical and laboratory examination is in order to establish a correct diagnosis. We must rule out such illnesses as tuberculosis, undulant fever, chronic malaria, etc. Struthers has aptly stated that any child or young adult who "fits the category of the unwell child, must be considered a rheumatic subject until other cause is found for his or her lack of health."

Occasionally a history of palpitation, precordial pain or tenderness may be elicited. When found in children or young adults this is of greater significance than in the older age group, for it is less apt to be imaginary. In view of the fact that the disease tends to run in families, it is important to ascertain if there has been any familial history of rheumatic fever or rheumatic heart disease. A careful inquiry may unearth unnoticed vague transient muscle or joint pains which, because of their mildness, occasioned scant attention on the part of the patient or of the parents. By this I do not mean that every "growing pain" should be indicative of the rheumatic state. Many of them are significant. Many more, however, are due to faulty posture, relaxed plantar arches, according to Erdheim, and minute fractures of the metaphyseal plates in certain rapidly growing children.

A history of frequent nosebleeds should arouse suspicion, inasmuch as repeated epistaxis seems to be definitely associated with the rheumatic state, and in particular with the relatively low-grade processes which we are considering. When taken into consideration with other symptoms which may be present and after other causes of nasal bleeding have been excluded, it often has considerable significance, although not rendering a conclusive diagnosis of itself. A persistent elevation of the pulse rate, especially when out of all proportion to the degree of fever present, should arouse suspicion and be carefully investigated. It may be necessary to take the sleeping pulse rate as the true rate, thus eliminating any emotional factor as the cause of the tachycardia. A gallop rhythm was stressed as an important sign of activity by Dr. L. P. Sutton. Vague abdominal pain comes next to epistaxis in frequency of occurrence as a presenting symptom in the active rheumatic state. (The cause has never been fully determined, but is probably due to a periarteritis involving the mesenteric vessels.) Because the pain similates appendicitis, a number of appendices have been removed and found normal. Several days after operation other acute signs of rheumatic fever presented themselves.

If the patient's history reveals a picture similar to the above, then it is our duty to go to further lengths to rule out the possibilities of an active rheumatic state including rheumatic carditis. On careful physical examination we may find much evidence to strengthen and confirm what has already been suggested by the history. The heart should be auscultated with the patient in the upright, prone or left lateral positions—both before and after exercise. In many cases we will find a low-pitched systolic murmur at the apex of the heart. Such murmurs are common and accompany many acute febrile illnesses, especially in children. However, many such murmurs disappear in a few weeks after the child's recovery from his acute infection. Should such a murmur persist, especially if it developed during or following an acute febrile illness, it should be carefully watched for any further developments. (Although not diagnostic of a rheumatic carditis its course must be observed in order to make certain that we are not overlooking an incipient lesion. This can be done in such a way as not to give the child's parents any unnecessary worry and without creating a cardiac neurosis in an older patient. In many such cases with a suggestive history to accompany the murmur it is safer to make a presumptive diagnosis of subclinical or atypical active rheumatic infection and seek confirmative evidence of a positive or negative nature from various laboratory procedures.

Almost always a definite leukocytosis accompanies an active rheumatic infection. The white blood count may run from 10,000 to 20,000. The higher figures tend to occur with severer infections. The Schilling count shows a definite increase in the immature forms of the myelocytic series (early in the course of the disease). A mild to moderate secondary anemia is present during the state of active infection. Accompanying the fall in the red blood cell count is a more than proportionate drop in the hemoglobin. The hematocrit reading also falls. These features may remain constant for long periods, returning to normal with the end of active infection.

The sedimentation rate of the red blood cells is increased during the stage of active infection and carditis. It is considered one of the most valuable and significant means of determining the presence and the end of activity, and as a guide to treatment. Before it can be evaluated correctly, however, we must be certain that other infections which may affect the sedimentation rate are not present. The method of Rourke and Ernstene, which takes into consideration the hematocrit reading and a correction for any anemia present, is considered the most reliable method by many authorities. Most workers regard the sedimentation rate to be of more value than the white blood count in determining the end state of activity. (The leukocyte count tends to return to normal earlier than the sedimentation rate. Nevertheless, abnormalities of either are regarded as indicative of active rheumatic infection). A new laboratory procedure which rivals the sedimentation rate as a means of determining the presence or absence of active infection is the formol-gel reaction. It appears to be more sensitive, as easy to perform and less readily influenced by other possible concomitant infections—a weakness inherent in any sedimentation rate determination.

Electrocardiographic tracings play an important role in the determination of the presence of active rheumatic carditis, if they show certain characteristic changes. These changes may be found in a large percentage of patients acutely ill with rheumatic carditis if the tracings are taken at the correct time. The changes considered most indicative of active carditis are prolongation of the P-R and Q-T intervals, and widening of deformation of the P wave or the QRS complex. Any prolongation of the P-R interval above 0.2 seconds is considered significant. In children a P-R interval exceeding 0.18 seconds is considered significant by many authorities, (as most normal children rarely exceed 0.16 seconds.) Struthers states that evidence of a delayed conduction time in the E. K. G., in the absence of a recent influenza or typhoid fever may be considered evidence of active rheumatic heart disease. Changes in the T wave may occur such as notching or inversion. Normal E. K. G. findings have little weight in excluding the presence of active rheumatic carditis unless the tracings are taken at sufficiently frequent intervals. (Significant changes in the A-V conduction time or in the conformation of the various complexes occurring in serial E. K. G. are of great diagnostic importance and are well worth the trouble of such a procedure.)

The x-ray is of value in detecting early increases in the size of the heart shadow. Such evidence is more reliable than conjectures made by percussion.

Not infrequently red blood cells, few or many, may be found in the urine during the course of an active infection. Coburn places hematuria as one of the classical signs of active rheumatic infection along with petechia and epistaxis.

In patients under the age of 40 years, the development of auricular fibrillation, if hyperthyroidism is ruled out, should be regarded as suspicious of an active rheumatic carditis until proved otherwise. This evaluation becomes more difficult in the older age group because of the increasing prevalence of the degenerative heart diseases.

The reason for such careful evaluation of the presence or absence of active infection is that active rheumatic fever and carditis may be asymptomatic or subclinical in type, and yet serious heart disease may develop during such periods when laboratory tests alone will indicate the presence of such an active infection. Even then it may be necessary to make repeated physical examinations over a considerable period of time before a positive diagnosis may be arrived at.

The giving of a prognosis in cases of rheumatic carditis is a hazardous affair for there are all degrees of severity of the infection and the disease may follow one of several courses. Some patients never recover from their first infection, dying in a period of weeks from an acute fulminating process. Others recover completely with little or at best minimal cardiac damage, never to have another attack, and live out their normal life expectancy. Others follow a prolonged subacute course extending over a period of six or eight years and die at an early age. Still others, comprising the largest group, have periodic attacks of activity every few years of varying degrees of severity. They too eventually die in one of these attacks or of the cardiac disability they have incurred. Some develop subacute bacterial endocarditis and die. In general it may be said that the earlier in life the initial heart involvement occurs, the more serious the outlook, and the shorter the patient's life expectancy. Most patients survive their first infection. It is also axiomatic that the older a person when he suffers his first rheumatic infection the less likely he is to develop rheumatic heart disease. Also the longer an individual goes without a second infection the less likely there is to be a reoccurrence. If he can escape reactivity for as long as six years, he will probably have no further infections. Subsequent infections potentiate any injury previously done to the heart, and there is also more likelihood the heart will suffer an injury although it has previously escaped damage. The injury to the heart in these subsequent infections is often out of all proportion to the severity of the new attack.

Should we finally decide the patient has active rheumatic carditis from an evaluation of the above signs, symptoms and laboratory data, what should be done for him to minimize the heart damage? Obviously from the foregoing discussion, in addition to treating the carditis, we must also treat any other manifestation of rheumatic fever present. Hence, this usually resolves itself into the treatment of rheumatic fever. Since we are dealing with a disease which has no specific treatment our efforts must be largely supportive and directed at aiding the patient to overcome his own infection.

The *sine quo non* of treatment of the patient with an active infection is rest and more rest. This must be complete, mental as well as physical. The parents must be made to understand what absolute rest implies and its importance. The patient soon learns to amuse himself with a minimum of bodily activity. Accasionally some mild sedative such as phenobarbital will be of value at the start in reducing rest. Bed rest must be continued so long as there are signs and symptoms of activity. It is probably wise to keep the patient in bed for at least a month after the temperature, uninfluenced by salicylate therapy, has returned to normal. The pulse rate, leukocyte count, formol-gel reaction and sedimentation rate must also be within normal limits. And, in addition, the weight curve should have returned to normal or at least have shown a progressive increase. The return of all these things to normal is the best indication we have of the cessation of activity. It is far better to err on the side of safety, for in general these people are not kept in bed long enough (a succeeding period of four to six months is then required to return them by graduated exercise to a full state of normal activity).

During the acute stages the diet is soft in character, as it would be for any other acute infection. As soon as the patient's condition permits he should be returned to a full, high caloric, easily assimilable, well-balanced normal diet. Extra nourishment should be encouraged, as moderate obesity seems to offer some protection against damage and recrudescences. An adequate vitamin intake should be assured, especially of vitamins A, B and C. Iron tonics are often needed to combat the anemia frequently found to be present.

Fluids should be forced unless contra-indicated by the presence of congestive heart failure, when they must be carefully regulated along with the salt intake. Ordinarily, however, they should be sufficient to replace the fluids lost by excessive perspiration, and to aid the kidneys in eliminating the toxic waste-products of the increased metabolism.

Should precordial pain be an annoying symptom, an ice bag may be placed over the heart.

Should this be insufficient to give relief, then codeine had best be administered in half grain doses P.R.N. If pericardial effusion develops it is much better left alone. (Rarely is it necessary to tap an effusion resulting from rheumatic infection. It should only be done when the pressure of the fluid on the great vessels is so great that it becomes embarrassing to the circulation, as indicated by a falling blood pressure and engorged neck veins). Also, it may be well to remember that Boas found that if the salicylates are given in large doses they bring about prompt relief in acute pericardial effusion of rheumatic origin. The pericardial exudate was rapidly absorbed with quick relief from dyspnea and toxemia and a rapid reduction in the pulse rate. He likened this effect to their action on rheumatic arthritis with effusion.

There has been considerable opinion voiced against the use of digitalis in rheumatic carditis. It should not be given routinely, but should certainly be given when auricular fibrillation or the signs and symptoms of congestive heart failure are present. (Some also believe it is to be of value in slowing the heart and preventing failure in rates above 140). For adults the usual amount recommended of the standardized leaf is 1½ grams given in divided doses in 24-36 hours. A maintenance dose is then established of 1 or 2 cat units daily.

The fever and joint symptoms are best relieved by one of several anti-rheumatic drugs. That none of these, or at least the salicylates, serve to diminish or have any effect upon the cardiac lesions per se was demonstrated by Wyckoff and his co-workers by electrocardiographic studies which showed that the conduction disturbances which are evidences of rheumatic myocarditis are uninfluenced by the salicylate therapy. Any benefit derived by the heart must be considered indirect, such as reducing its load by relieving the tachycardia due to the fever or toxemia. The most commonly used drug, sodium salicylate, should be given in 15-20 gr. doses every hour with an equal amount of sodium bicarbonate until there is relief from joint symptoms and fever or until signs of toxicity (severe tinnitus, excessive sweating, nausea, blurred vision or mental confusion) are complained of. Then the dose may be reduced to every two hours for two or three days; then to every four hours for several days and finally to every five hours until the signs of infection have been absent for a week or ten days. Should evidence of toxicity develop, the drug must be stopped for several doses or reduced immediately. In patients who do not tolerate sodium salicylate, acetylsalicylic acid may be substituted to advantage using the same dosage. (Occasionally it works better.) Sodium salicylate may also be given in a 2% solution by rectum, two or three times daily if the stomach is upset by the drug. A cleansing enema should be given first.

Amidopyrin in 5 gr. doses every four hours can be used with strikingly good results in controlling the fever and pain. Heminger and McHardy also report that it rapidly returns the pulse rate, white blood count and sedimentation rate to normal. After the relief of the symptoms its dose is reduced to 15 grains daily instead of 30. Because of the tendency the drug has of precipitating agranulocytosis, frequent white blood counts must be taken. Should the white count drop to 5000 or lower the drug must be discontinued. All these drugs must be reduced in dosage to suit the age and weight of the patient.

Administration of sulfanilamide has been proved useless and, in fact, there is evidence to prove its use actually makes the disease worse. However, there is also considerable evidence to show that 18 grs. daily from November through June may be given safely with an apparent reduction in the number of relapses or recurrences of the disease. Hence it may become an invaluable prophylactic aid.

The value of tonsillectomy in the prevention and treatment of rheumatic fever and carditis still remains a point of debate. Statistical studies concerning its ultimate value are disappointing, as there is little evidence that it protects against either initial attacks or recrudescence. If the tonsils are enlarged, grossly infected or there is a history of repeated tonsillitis they should be removed at the proper time. However, it is wise unless there are extenuating circumstances to delay their removal, to wait until convalescence is well established. It is probably better not to make tonsillectomy a routine procedure, but to evaluate the benefits to be derived by each individual case.

Control studies have pretty conclusively shown that there is little merit in the use of anti-streptococcal sera or vaccines in the treatment or prevention of the rheumatic state. Any benefit that might be derived is due to a non-specific rather than specific effect.

The patient should be guarded against chilling, exposure and coming into contact with acute upper respiratory infections and in particular with hemolytic streptococci infections. Should he unfortunately develop an acute upper respiratory infection he should immediately be confined to bed and remain there until all symptoms and signs of infection have been absent for a week.

SUMMARY

1. Rheumatic fever and rheumatic heart disease are far more common in the South than is generally appreciated. Statistics have been presented to emphasize this fact.
2. Every child or young adult coming to us with the complaint of being unwell, with a low-grade fever, who is underweight, underdeveloped, fatigues easily, is pale, has a rapid pulse, precordial pain, a history of epistaxis, anorexia, abdominal distress or vague muscle pain, we should suspect a potential case of rheumatic fever, and hence active rheumatic carditis, until proved otherwise.
3. To confirm or rule out such a possibility it is often necessary to correlate the history and physical findings with such laboratory procedures as the white blood count, red blood count and hemoglobin, sedimentation rate, serial electrocardiagrophic studies, x-ray studies and formol-gel reaction.
4. Even then we may not be able to make a positive diagnosis and may have to keep the suspect under observation for several months or years before an ultimate conclusion is reached. This can well be done without developing a cardiac neurosis in the patient.
5. An outline of the presently accepted therapeutic measures has been presented.

CONCLUSION

I have given this paper with the earnest desire to stimulate your interest in the rheumatic state and its potentialities and disabuse you of the fetish that the rheumatic state and rheumatic carditis is a clinical rarity in the South. By realizing this we may be instrumental in saving many of our youth years of invalidism and the community an economic burden.

BIBLIOGRAPHY

1. Ritchie, W. T.: Acute Rheumatic Carditis. Lancet, 237:581 (September 9) 1939.
2. Swift, H. F.: Features Which Suggest Public Health Consideration of Rheumatic Fever. Bulletin of New York Academy of Medicine, (August 1940) Pages 499-573.
3. Roth, I. R.: Clinical Aspects of Rheumatic Fever in Adults. Bulletin of the New York Academy of Medicine, (August 1940) Page 515-520.
4. McEwen, Currier: Chapter on Rheumatic Heart Disease, Stroud's Diagnosis and Treatment of Cardiovascular Disease.
5. Struthers, R. R.: Rheumatic Heart Disease in Adolescence, Canadian Medical Association Journal, (February 1940) Page 128-134.
6. Hedley, O. F.: Incidence of Rheumatic Heart Disease Among College Students in the United States, Public Health Reports, Vol. 53, No. 37 (September 16, 1938) Pages 1635-1647.
7. Martin, Alexander T.: Clinical Aspects of Rheumatic Fever in Children, Bulletin of the New York Academy of Medicine, (July 1940) Vol. 16, 475-482
8. Cecil, Russell L.: The Therapy of Rheumatic Fever, J.A.M.A. (April 13, 1940) Vol. 114, No. 15, Pages 1443-1447.
9. Levine, Samuel A.: Clinical Heart Disease.
10. White, Paul D.: Heart Disease.
11. Hench, P. S., et al: The Problem of Rheumatism and Arthritis, Review of American and British Literature for 1938, Annals of Internal Medicine, 13:1655 (March 1940) and 1837 (April 1940).
12. Elghammer, H. William: Treatment of Rheumatic Fever in Children, Illinois Medical Journal, 76: 527 (December) 1939.
13. Hughes, Laurence: Acute Rheumatism, Medical Journal of Australia, 2:423 (November 2) 1940.
14. Mills, Clarence A.: Seasonal and Regional Factors in Acute Rheumatic Fever and Rheumatic Heart Disease, Journal of Laboratory and Clinical Medicine, 24:53 (October) 1938.
15. Schultz, Mark P. and Rose, Edythe J.: The Formol-Gel Reaction in Rheumatic Fever: An Aid in the Diagnosis of Active Carditis, Public Health Reports, 54:248 (February 17) 1939.
16. Ash, Rachel: The Evolution of Rheumatic Heart Disease in Childhood, Pennsylvania Medical Journal, 44:484 (January) 1941.
17. Meiks, L. T.: The Influence of Tonsillectomy on the Progress of Rheumatic Heart Disease, Journal of the Indiana State Medical Association, 33:666 (December) 1940.
18. Kuskin, Lanorence and Brockman, Louis: The Two-Step Test as a Diagnostic Aid in Subclinical Rheumatic Heart Disease; Preliminary Report, Archives of Pediatrics, 57:578 (September) 1940.
19. Levitt, Abel and Jaskiewiez, Stanley J.: Rheumatic Heart Disease, An Analysis of 110 Cases, American Journal of Clinical Pathology, 10:467 (July) 1940.
20. Thompson, Edward: The Treatment of Rheumatic Heart Disease, Nebraska State Medical Journal, 25:58 (February) 1940.
21. Nichol, E. Sterling: Geographic Distribution of Rheumatic Fever and Rheumatic Heart Disease in the United States, Journal of Laboratory and clinical Medicine, 21:588 (March) 1936.
22. Fantus, Bernard: Therapy of Rheumatic Fever, J. A. M. A. Vol. 102; No. 25; (June23) 1934.
23. Gibson, Stanley: Rheumatic Fever and Chorea; Brennemann's Practice of Pediatrics.
24. Gibson, Stanley: Rheumatic Heart Disease; Brennemann's Practice of Pediatrics.
25. Hench, P. S., et al: The Problem of Rheumatism and Arthritis, Review of American and English Literature for 1939; Annals of Internal Medicine, Vol. 14; No. 8; (February 1941) 1405-1419.

26. Wallgren, A.: Acute Rheumatic Fever in Children. Journal Irish Medical Society. (November 1939) 793-801.
27. Stroud, W. D.: Fifteen Years Observation of Children with Rheumatic Heart Disease. J.A.M.A. 114: 639-634 (February 24. 1940).
28. Robbins, H. and Durante: Frequent Diagnostic Errors in Cases of Acute Carditis. Archives of Pediatrics. 57:216-225 (April 1940).
29. Heninger, B. R., and McHardy, Gordon: Aminopyrine Treatment of Rheumatic Endocarditis Associated with Active Rheumatic Infection. Southern Medical Journal. Vol. 31; No. 10; (October 1938) 1056-1059.
30. Klein, R. F.: Wiltmann Reaction and Sedimentation Rate During Rheumatic Fever of Childhood. American Journal Diseases of Children. 39:48-66, January, 1940.
31. Bethea, O. W.: International Medical Digest. Vol. 36 (February 1940) 114-119.
32. Coburn, A. F., and Moore, L. V.: Prevention. Use of Sulfanilamide. Medical Clinics of North America. 24:633-638 (May 1940).
33. Campbell, A. M. G.: Difficulties in Diagnosis. Lancet. 1:777-780. April 27, 1940.
34. Roberts, C. J.: Types of Rheumatic Fever, Diagnosis and Treatment. Journal of Oklahoma Medical Association. 33:15-8. (August 1940).
35. Wilson, May G.: Diagnosis of Heart Disease in Children. Regression of Physical Signs. J.A.M.A., 110:501 (1938).
36. Wilson, May G.: Rheumatic Fever and Rheumatic Heart Disease. Commonwealth Publication. One Volume. 1940.
37. Cahan, J. M.: Rheumatic Heart Disease in Philadelphia School Children. Annals Internal Medicine. 10:1752 (1937).
38. Wood, Francis C.: Heart Disease Among University Students. Proceedings of Thirteenth Annual Meeting of the American Student Health Association. Bulletin. No. 16. Page 104 (December 1932).
39. Garenburg and McGlearey: Rheumatic Disease of Heart in Pregnancy. American Journal of Obstetrics and Gynecology. 41:44-52. No. 1 (January 1941).
40. Climate and Rheumatic Fever: Editorial in Journal A. M. A. (January 16, 1937) Page 210.
41. Thomas, Caroline Bedell. et al: Prophylactic Use of Sulfanilamide in Patients Susceptible to Rheumatic Fever. J.A.M.A., Vol. 116; No. 7; 551-560 (February 15, 1941).
42. Walsh, Bernard J. and Sprague, H. B.: The Treatment of Congestive Failure in Children with Active Rheumatic Fever. J.A.M.A., Vol. 116; No. 7; 560-562 (February 15. 1941).
43. Sosman, Merrill C.: Subclinical Mitral Disease. J. A. M. A., Vol. 115; No. 13. Page 1061-1066 (September 28. 1940).
44. Boas, Ernst P. and Ellenberg, Max: Rheumatic Pericarditis with Effusion Treated with Salicylates. J. A. M. A., Vol. 115; No. 5. Page 345-348 (August 3, 1940).
45. Swift, Homer F.: Public Health Aspects of Rheumatic Heart Disease: Incidence and Measures for Control. J. A. M. A. Vol. 115; No. 18. Pages 1509-1578 (November 2. 1940).
46. Bland, Edward F., et al: Disappearance of the Physical Signs of Rheumatic Heart Disease. J. A. M. A., Vol. 107; No. 8; Pages 569-573. August 22. 1936.
47. Massie, Edward and Levine, Samuel A.: Acute Rheumatic Pericarditis. J.A.M.A., Vol. 112; No. 13; Page 1219-1223 (April 1. 1939).
48. Bland, Edward F. and Jones, T. D.: The Delayed Appearance of Heart Disease After Rheumatic Fever. Vol. 113; No. 15; Page 1380-1383. (October 7, 1939).
49. Christian, Henry A.: The Diagnosis and Treatment of Diseases of the Heart.

DISCUSSION

Dr. W. K. Purks (Vicksburg): Dr. Lake has given us a very excellent review of the generally accepted facts concerning rheumatic fever and rheumatic heart disease. I think we may, with profit, call particular attention to two facts which are set forth in his presentation. By far the most important of these is the fact that rheumatic fever and its sequelae are not extreme rarities in the South and consequently we should all be more on the alert to detect them. I am quite sure that the disease is less common in the South than in many other areas, but not in any sense exceptionally rare in occurrence. The statistics which the author has given us would bear out that conclusion. They would, in fact, appear almost to indicate as high or higher an incidence in the South than in other areas, particularly the North. I do not think he intends to leave that impression. It is unfortunately true that the one reason why the disease is assumed to be rare in this section is the relatively poor diagnostic skill of our physicians in respect to this particular disorder and the relatively rare employment of consultation at the hands of competent cardiologists. Even if the disease were extremely rare in this area, this should not in any sense deter us from attempts to perfect our skill in its detection for, as I have stated on one previous occasion, any so-called rare or unimportant disease becomes the all important disease to any particular individual who suffers from it. The essence of diagnostic skill in respect to rheumatic fever is a complete familiarity not only with the typical or florid manifestations of the disease, but with what we might term subclinical manifestations. all of which have received due emphasis from the author.

We come then to the second fact referred to above as being of importance. In contrast to the usual picture of rheumatic fever in other sections of the country, it appears that in the South the disease is much less likely to present the typical florid manifestations of fever, migratory polyarthritis and early cardiac involvement. Consequently, a relatively high percentage of those patients who in early adult or later life show definite rheumatic heart disease will give absolutely no history of having had rheumatic fever. It is here that we must begin to look for a history of frequent unexplained epistaxis in childhood, a history of growing pains and other suggestive evidence which Dr. Lake has so well presented. It also appears evident that recurrence of attacks of rheumatic fever are distinctly less common in the South and that perhaps for this very reason even when a definite cardiac lesion is demonstrable it more often will remain quiescent and asymptomatic if the patient resides in the South. It is for this reason that children with active rheumatic infection are often benefited by spending the winter months in a warm climate.

Finally, I may say that we may all profit by giving due thought to the substance of the author's presentation, bearing in mind especially that although rheumatic fever is less common in the South we may expect to see it with a fair degree of frequency if we look carefully for it.

DR. JOHN ARCHER (Greenville): On receiving an invitation from Dr. Lake to discuss his paper, I indeed felt quite complimented and realized that a few statistics from other states would be of interest. I wrote to the various health departments requesting some information in regard to this disease. I have selected a few to present to you.

The total number of deaths reported from chronic rheumatic diseases of the heart in the entire United States in 1939 was 26, 211 of which 13,354 were males and 12,857 were females.

In the state of Mississippi in 1940 there were 54 deaths reported due to rheumatic heart disease and acute rheumatic fever. Louisiana for the same year reported a total of 32 deaths.

In North Carolina from 1936 to 1940, inclusive, 325 deaths were reported due to acute rheumatic fever.

Texas reports 693 deaths in 1939 from chronic rheumatic diseases of the heart.

The state of Georgia reports a total of 369 deaths due to chronic rheumatic diseases of the heart in 1940, and Virginia reports 458 from 1937 to 1939, inclusive. So much for several of the Southern states.

Selecting a few of the Northern states where the disease has been most common and most carefully treated, we find in Massachusetts there were 400 deaths from rheumatic heart disease in 1940, in Kansas, 77, and in Utah, 378 over the three-year period of 1937 to 1939, inclusive.

It would seem from this study that every section of this country has to be mindful of this disease. Georgia for 1940 reported nearly as many deaths as did Massachusetts, the key state for rheumatic heart disease.

Dr. Lake's most instructive paper should stimulate us Mississippians to examine our patients more carefully for this disease. Now that the Mississippi Department of Health has included in its program rheumatic heart conditions, as so many other states have done, we will soon get more complete reports as to the prevalence of rheumatic heart disease in Mississippi.

DR. W. H. FRIZELL (Brookhaven): The essayist did not mention the etiology of this trouble. We would like to know first what causes the disease before we attempt to treat a case, and then after we get the case we can study out the treatment. We would like to know more of the etiology of rheumatic fever, what causes its prevalence and whether or not tonsillar trouble in early life does not encourage it, and if so in what proportion. Often we find cardiac trouble and later on many cases of myocarditis, and when we get a history of these cases, we find in early childhood the patient had sore throat all the time. I would like to have that discussed more freely.

DR. HARVEY F. GARRISON (Jackson): I wish to congratulate the essayist for such a splendid paper, and as suggested by the one who has discussed it just before Dr. Frizell, I think the paper is very timely. There are one or two things that I wish to emphasize that the doctor has already brought out. The first is what was said in regard to symptoms. We have many cases of rheumatic heart disease in children that are not recognized simply because they were not given a careful physical examination, including laboratory, etc.

The other is one of the main points in discussing rheumatic heart condition in children —a careful history. If the doctor will take a more careful history and pay particular attention to the things enumerated by the essayist as to symptoms he will certainly arrive at a proper diagnosis. Once a diagnosis is made the treatment is essentially the same. The essayist has thoroughly covered that subject.

Now may I encroach just a little on the prerogatives of the essayist in answering Dr. Frizell? If I may be permitted I will say that in listening to a discussion of this same subject before the medical section of the A. M. A. in New York last year there were a number of cases reported there in regard to the effect of tonsillitis on rheumatic heart disease. It has been found that we are all grossly wrong about our interpretation of tonsillitis having so much to do with rheumatic heart disease. Now the essayist there showed very definitely that it had not and that we were mistaken in regard to that, so let's don't emphasize that point too greatly—it may mislead us.

There are many things that have been suggested in regard to the treatment aside from our old reliable rest, but I feel they are not worth while. The treatment suggested by the essayist is ample in most of the cases and should be followed right along, but I would like to emphasize (1) a careful history; (2) thorough physical examination to detect these cases, and (3) treatment.

DR. LAKE (closing): I have only to say about Dr. Purks' and Dr. Archer's comments that they bear out what I wanted when I asked them to discuss my paper. I was more or less of the opinion of Dr. Purks, that it isn't as common in the South as in the North; however, I have happened to get the same figures to a great extent that Dr. Archer did, and after I went over them I reached the conclusion that it is a rather sparsely disseminated disease—that one may find a few cases in Mississippi and Louisiana or many cases in Tennessee and Kentucky, and the same occurrence in the same latitude up north, hence I believe that Dr. Archer's figures help to emphasize the fact that there are cases if we look for them.

Dr. Frizell asked about the etiology. There are three main variations on this. For many years streptococci were the sole cause of the disease. They worked away from that to allergy, followed by another school which came up with the theory that streptococci and allergy were out of the picture. These theories held neck and neck until sulfanilamide came in. Now the people with the streptococci seem to be right in the South because they found if they give these patients 13 grains throughout the winter and spring months their incidence was cut down in relation to tonsillitis and this disease. There are a great many who have reported up to 30,000 pointing out that removal does not prevent recurrences, does not appear to make any difference in the severity of the disease—in fact does not do anything. You merely remove them and the other foci of infection, on the same basis that you remove any foci of infection in an individual who has an illness that may become chronic, with the idea that you will keep his health at the highest possible level. I think Dr. Garrison outlined my paper better than I did.

Gallbladder Disease*

M. Q. EWING, M.D.
AMORY, MISS.

It is remarkable how tremendously much a recently graduated physician knows. He can make diagnosis on the sidewalk and advise sure cures for almost anything. As regards any particular condition, he knows what is the best thing to do and he is not troubled much by its efficacy. The world is his oyster and he knows what to do with it. I was just such a young fellow when I started and none of them was more cocksure than I. But gosh! What terrible things time does to one's cocksureness and certainty. Plato was right: "The more you know the less you know with certainty." From sad experience our infallibility falls from us like autumn leaves, we become slower to advise, prone to hesitate in advising radical measures, and in the eyes of younger men become doddering old fossils. Such is the course of development of "conservatism."

Apparently animals learn from experience easier than some men. Even a mule will not touch an electric fence more than twice. The first time he is puzzled and uncertain and the second time he is convinced and he does not make the mistake a third time. Yet human beings and even the learned physician may repeat the same mistake repeatedly for a lifetime. It is probable that we would not touch the live wire a third time either because the experience was unpleasant to us personally, but mistakes that involve someone else and unpleasantness affecting them (namely, our patients) may not impress themselves so vividly upon our consciousness.

Case records are valuable particularly to the surgeon in order that he may evaluate the results of his surgery. Probably the most valuable is the follow-up record, particularly if it extends over a long period of years.

The physicians refer us patients, which patients we operate upon and after a period of recuperation send home to their family physician, usually marked up as "cured or relieved" on our records and pat ourselves on the back for our marvelous ability in restoring health to the sufferer. It is at this point that the value of the follow-up record becomes evident. I know of nothing more chastening of the surgeon's self-esteem or more conducive to the development of a more becoming sense of modesty than the keeping of adequate follow-up records. What general practitioner among you who when called at about 2:00 A.M. to give a hypodermic to Mrs. Jones to relieve that "same old pain" which was cured by operation by Dr. Smith, hasn't muttered to himself "I wish that bird who cured her had to treat a few of his patients afterwards."

But do you write Dr. Smith and tell him that his operation failed to relieve? No! Dr. Smith is a good fellow and a good friend of yours and there is no use making him feel bad. Does Mrs. Jones go back to see Dr. Smith? Usually not. She has had enough of surgeons to last her awhile and would now rather depend upon her family physician, who knows her and has not promised her any sudden radical cure. If she does consult a surgeon, it will probably not be Dr. Smith, because he had a chance at her and promised to cure that pain in the side and didn't do it after all the discomfort and expense incident to "the operation." So Dr. Smith goes blithely along and Mrs. Jones is still chalked up on his record as "cured." Adequate follow-up records would really help Dr. Smith a whole lot.

Usually the older a general physician becomes the sounder his judgment becomes provided he had any judgment whatever to start with. We say that "age brings conservatism" which incidentally admits that whatever erratic course we ourselves may follow, we either identify or confuse conservatism with sound mature judgment in medical practice. The reason is that the general practitioner always has the follow-up record of his treatments over the course of years and when he makes mistakes his patients tell him of them, not once but many times, and many nights of lost sleep convince him that perhaps that new treatment "wasn't so hot after all."

It is not similarly true that age necessarily brings conservatism and sound judgment to the specialist. It may or may not. It all depends upon the adequacy of the follow-up record. We have all heard the lengthy erudite papers full of glowing reports of unfailing success of certain modes of therapy and when our results with the same method failed to give such brilliant results, we may wonder if we are "not quite bright" or maybe "not so skillful as Dr. Brown of the brilliant successes." There could also be another answer. Perhaps Dr. Brown did not have an adequate follow-up.

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*Read before the Northeast Mississippi Thirteen Counties Medical Society, December, 1940, Tupelo, Miss.

But what has all this to do with chronic cholecystitis, which is the title of this essay? I entered into surgery at the beginning of the trend toward cholecystectomy rather than cholecystostomy. I was taught that typical cholecystitis was "cured or relieved" by cholecystectomy; that the colics all disappeared and that the indigestion, etc., all cleared up too. The surgeons I trained under believed this. The textbooks stated it and numerous brilliant essayists reported whole series consisting of hundreds of cholecystectomies "cured or relieved." I believed it too and acted accordingly and after my cholecystectomized patients were ready to leave the hospital, I congratulated them on their recovery and promised them they would be relieved of their complaints. I lived in this sort of Fool's Paradise for a long time and probably would still be as fatuous and self-satisfied about my results if it were not for follow-up records. Many of them were quite illuminating. To illustrate, it will be well to report a few cases.

CASE I. Mrs. G. S. G., age 33, married. Seen first in October, 1922. At that time she was complaining of typical gallbladder colic, coming on usually at night or after a full meal; the pain being in the epigastrium but referred under right shoulder blade. She had bloating and belching after meals and was persistently constipated. The attacks were now coming on about once every seven to ten days and required one to two hypodermics of morphine for relief. She first began having these attacks about two years past at which time she was nursing her last baby, then six months old. She has had six pregnancies and has five living children.

Examination showed an obese young woman, height 5 feet four inches, weighing 164 pounds. There was definite tenderness in right hypochondrium. Temperature, pulse and respiration normal. Blood pressure 130/75. Blood and urine normal, no jaundice or history of jaundice. The genitals showed cervical laceration and erosion, and a relaxed perineum showing only a mild laceration. Diagnosis: chronic cholecystitis. This patient was operated upon November 3, 1922. The operation consisted of cholecystectomy, appendectomy, and cautery of cervix uteri. The gallbladder contained four large faceted stones and the common duct was free and open. The wound was closed without drainage and she made an uncomplicated recovery, leaving hospital on the fourteenth day.

In reply to follow-up letter fifteen months later she reported that she did well and was free of colic for thirteen months although still having the same bloating and belching after meals. She reported that she had two attacks of gallbladder colic exactly like those before operation. She reported for check-up some two weeks later following a third attack of colic.

The examination disclosed nothing except a gain of weight to 198 pounds. Questioning her husband disclosed that she was an enormous eater and that each attack followed an excessive meal. She was still badly constipated. She was advised about diet, advised to lose weight, and given thyroid extract and treated for constipation.

This patient has been seen at intervals over the past eighteen years. Her present weight is 230 pounds, she still diets herself only occasionally, still has digestive upsets and occasional attacks of colic, with nausea and no vomiting with pain referred under the right shoulder blade, and she is still persistently constipated and doses herself faithfully about twice weekly with some form of drastic cathartic. She has passed the menopause and two years past had a B. M. of —24— and a blood pressure of 188/100. She has never had any jaundice.

This patient was the typical type of gallbladder case supposed to be most frequently relieved by cholecystectomy. She had stones and typical colic. Operation apparently resulted only in the colics becoming less frequent. Undoubtedly her hypothyroidism and gluttony have contributed to the unsatisfactory result. I would not say that the cholecystectomy was not the correct thing to do, but I certainly have been more careful in my promise since her reply to follow-up later. She has as yet shown no signs of common duct obstruction but why stones have not formed in the ducts is hard to say. It is possible that she does now have common duct stone as the cause of the symptoms of which she complains since they do occur in the absence of both jaundice and vomiting.

Case II. Mrs. W. A. C., married, age 46. Seen first 1-8-33. She had been married twice, had one child 30 years old, passed menopause in 1930. She had been operated upon for pelvic repair work in 1924 by Dr. R. L. Sanders, of Memphis. Her complaint was typical of chronic cholecystitis of several years' duration, namely indigestion, bloating, belching, constipation, typical gallbladder colic, no jaundice. She was advised and refused operation.

I next saw her in February, 1935, at which time she was very severely jaundiced and having colic and had lost much weight and was very debilitated. She was treated preoperatively and operated upon, the operation consisting of cholecystectomy and drainage of common duct. The gallbladder contained four large stones and the common duct two still larger ones. The common duct was drained for eighteen days. The recovery was stormy but she left the hospital in good condition.

She is still under my care and her history subsequent available. She is relieved of colic and pain but still suffers from indigestion and inability to eat many foods. She is obstinately constipated in spite of careful treatment. She states that her indigestion is fully as bad as it was before and her constipation is worse.

Case III. Mrs. M. D., age 38, married, has two children, ages 14 and 17. Seen first in December, 1932. She was complaining of typical gallbladder colic, bloating and belching after meals, and severe headaches. She was somewhat obese, weighing 152 pounds and only 5 feet 3 inches tall. The indigestion, fullness and belching did not occur after every meal but only at intervals and was always accompanied by severe headache and occasional nausea but no vomiting. The attacks of colic with pain radiating under right shoulder were irregular in occurrence. Her blood pressure was 110/79 and physical examination otherwise normal except for abdominal distention, tenderness in right hypochondrium and obesity.

Graham test showed a gallbladder that filled poorly and emptied poorly but no stone shadows. She was kept in hospital for a couple of days and the test repeated. It was absolutely normal. She left the hospital at 9:00 a.m. the following morning but did not return to her home in Alabama. She had lunch at a local cafe and made her lunch particularly on sphagetti. She reported at my office at 2:00 p.m. having severe gallbladder colic requiring ½ grain morphine for relief. I noted also that she was suffering from excessive lacrimation, she was sneezing and while I was preparing the hypodermic of morphine she began to have mild asthma. She was again admitted to hospital and later during the afternoon showed some urticaria of arms and back.

These symptoms of food allergy synchronous with the gallbladder colic suggested that the gallbladder symptoms might be allergic also. On examination she was found to be severely allergic to wheat, eggs, nuts, and pepper. She was placed on diet eliminating those foods and was comfortable for a period of four months, at the end of which time she abandoned her diet, with recurrence of the entire train of symptoms. She also abandoned me. When next I heard from her she was in a Birmingham hospital where her appendix and gallbladder had been removed and she had been assured of a "cure."

I did not see Mrs. D. for four more months, when she reported with colic and asthma and a history of recurrence of all complaints within a week of leaving the hospital. She has followed her prescribed diet now for about six years and as long as she does not lapse from it she does well. Wheat in any form still provokes the occurrence of a typical gallbladder colic usually within two hours of the meal.

I have two other cases under my care in which allergy to cheese and allergy to eggs are the decisive factors. In each case typical symptoms but negative Graham tests, have led to investigation disclosing the allergic factor. In all three cases there is severe headache associated with the symptoms of cholecystic disease.

Any surgeon who follows up his cases will find similar cases to report and I do not intend to continue enumeration of case reports. The longer I practice surgery the more I become convinced that gallbladder surgery should not be performed in the absence of typical colic or evidence of obstruction of the cystic or common ducts. Indigestion accused of resulting from gallbladder disease has a better chance of relief by non-surgical measures. I am also convinced that the general practitioner believes this fact more firmly than the surgeon and is acting accordingly. If I ask of the physicians gathered here, the question, "How many of you have or think you have gallbladder disease and are avoiding surgery?", the results would probably be illuminating. The reason this is true, is that the general man sees the after results of too many "surgical cases."

Do not understand me to be advising against gallbladder surgery for such is not the case. I am merely making a plea for a little more conservatism in advising such surgery and in the promises in regard to what such surgery will achieve. I also wish to note two other facts that are apparent to me from a study of my own records and which may be of value to others who do gallbladder surgery. They are:

(1) Regardless of the pathology or the type of operation performed, unless you succeed in regulating the dietary habits of your obese gallbladder patient, postoperatively, the result will not be good.

(2) In all of your gallbladder cases coming to operation, in which there is a history of vomiting during the gallbladder colics, be on the lookout for common duct stone, independent of history or presence of jaundice. In a high percentage of such cases investigation of the common duct will reveal stone, and it is such stones overlooked that may account for some of the postoperative colics.

Care of the Newborn*

CHARLES E. WARD, M.D.
JACKSON, MISS.

THE CARE of the newborn includes the following procedures:

1. Resuscitation.
2. Examination and appraisal.
3. General care.
4. Treatment of complications.

I have found the woven silk tracheal catheter with mucus trap to be of great value in resuscitation. The catheter can be easily slipped through the glottis. The respiratory passages may be cleared of mucus first, then artificial respiration can be carefully given by gentle puffing through the catheter. The body heat must be maintained. Oxygen and carbon dioxide mixture may be administered.

The infant should be carefully examined immediately after birth in order to detect any anomalies or injuries which might threaten life or useful functions.

The general care of the infant may be widely varied. Many pediatricians do not have the babies bathed at all. It is surprising how quickly the vernix will disappear without objectionable odor.

I usually have the infant carried to the breast at 12 to 18 hours after birth. Infants weighing less than 7 pounds are put on a 3-hour schedule; those over this weight do nicely on a 4-hour schedule. The baby is offered only water every 3 or 4 hours until he is 36 hours old at which time a complementary formula is offered after the breast. The formula is only given in small amounts and is discontinued when the mother's milk supply is established. I have recently been well pleased with the exclusive and continuous application of cod liver oil ointment to the mother's nipples. If artificial feeding is necessary my standard formula is:

Evaporated milk	10 ounces
Water	20 ounces
White Karo syrup	3 tablespoons

Throughout the newborn period the infant must be carefully observed for complications which may develop. Cerebral birth injuries are usually treated conservatively with rest, sedatives, and intramuscular injections of blood. Spinal puncture is of questionable value.

Vomiting and diarrhea are often due to feeding too early, and over-feeding.

Inanition fever may develop on the third or fourth day if the infant does not take sufficient fluid.

Infections of all types must be carefully avoided by aseptic technique and isolation.

Hemorrhagic disease may be prevented by administering vitamin K to the mother shortly before delivery. The condition may be treated in the infant by administration of vitamin K and by giving blood intramuscularly. Anemia of the newborn, and other more serious related conditions may be treated by repeated transfusions, liver extract, etc.

In all instances the infant should be treated as an individual and his care and treatment should be varied to suit his particular case.

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*Read before the Northeast Mississippi Thirteen Counties Medical Society, December, 1940, Tupelo, Miss.

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Manuscripts and material for publication under the Mississippi State Medical Association should be received not later than the twentieth of the month preceding publication. Address material to Lawrence W. Long, M.D., Suite 412 Standard Life Building, Jackson, Mississippi.

You will note the letter to Dr. Underwood from Dr. Handley of the Commonwealth Fund. These scholarships from the Commonwealth have been of great benefit to the profession in Mississippi and in turn to the people. We should be very grateful to the Foundation for its help and in turn to Dr. Underwood for his alertness in looking after our interests. Every fellowship should be taken that is offered. Every day there is something new in medicine. A course is always in order for the practicing doctor of any age.

The next meeting of the Northeast Mississippi Thirteen Counties Society will be held in Aberdeen, a fine little city with much culture, preserved to remind us of the Old South and to stir our Southern pride. It is the home of Dr. Jimmy Acker, a past-president of the state association and of Dr. W. A. Evans who is known, loved, and respected around the world.

We are very grateful for an invitation to the last meeting of the Lauderdale County Medical Society which was entertained by cordial and affable Dr. M. J. L. Hoye and deeply regret that we could not attend. We note with much pleasure the continued activity and progress made by this cociety.

You will note the report of Dr. W. T. Thornhill, of Crosby Clinic, of his local medical society. We are sure this was a very fine program knowing the talent of these auxiliary members as we do. One of our most enjoyable visits as president was to Centerville. They gave us a warm and cordial hand that we shall never forget.

Southern Medical Association, thirty-fifth annual meeting, will be held at St. Louis, Mo., November 10 to 13.

Please take note of our military department, edited by Major Long. He will make it interesting and helpful.

You will note the call by death of many prominent ones from our ranks in Mississippi within the last few weeks. Their loss is keenly felt by the profession and by the people.

Dr. W. H. Banks, of Philadelphia, had a birthday not long ago and he has made some observations that we will pass on to you in the next issue.

The Third Edition of THE CARE OF THE AGED, by Dr. Thewlis, has just been received from the C. V. Mosby Company for review. Every practitioner will want a copy of this book.

You will read with interest the list of essayists already obtained for the next meeting of the Mid-South Postgraduate Medical Assembly, which will holds its annual session at the Peabody Hotel in Memphis next February.

The arsenal of democracy for the world is largely in the Southern states. It is the incubation center for real democratic leadership. No profession has a greater opportunity to aid in the mental and physical phases of this leadership than the medical profession.

Dr. H. G. Waldrop, of Ripley, dropped in to say howdy to the editor as he rushed along his line of duty. Just recently he had delivered four babies in one day. Four babies in a general practice that has a radius of ten to fifteen miles indicates concentrated activity and accurate utilization of time. This day's work is a good index of what is just ahead of the general practitioner in the immediate future. He will arise to the situation, though, in keeping with the precedent that has been set by the Southern soldier.

If any well qualified, eye, ear, nose and throat man who is interested in a large practise in a Southern city, with office already well-equipped, write the editor of the Mississippi Doctor at once.

Surgical collapse measures do not cure tuberculosis; they simply rest treatment and permit patients to be discharged from the sanatorium in better condition and with more assurance that they will remain well and useful citizens. — Chas. K. Petter, M.D., Contact, Feb., 1941.

The risk of contracting tuberculosis from extra-familial contact is greatest among school companions at the ages when resistance to the disease is lowest, namely, the "teen" ages; and among fellow workers, especially when the occupation is one which increases the risk of developing affections of the lungs. — Report. Milbank Mem. Fund, 1928-40.

Dr. Ross E. Anderson, of Jackson, Miss., was recently granted a certificate from the American Board of Otolaryngology at a meeting in Cleveland, Ohio. This is the highest rating board for specialists in eye, ear, nose and throat. Our men in Mississippi in this specialty are moving up the ladder of effiency.

Dr. O. O. Myer, associate professor of medicine in the University of Wisconsin, spent from August 5 to 8 with the staff of the North Mississippi Community Hospital at Tupelo. Ward rounds were made and clinics held during the day. Blood discrasias, sulfanilamide, heart disease, and endocrinology were among the subjects discussed in lectures at night by Dr. Myer. Doctors from surrounding territory were invited in to take part in this fine postgraduate course. Again we see modern medicine brought to the busy practitioner and in turn applied to the masses in the small town and rural community. This is as it must be.

ACCIDENTAL DEATHS

In round numbers we have a hundred thousand accidental deaths in the United States each year and nearly ten million injured. One person dies every five minutes from accident, one every fifteen minutes from motor car accident. In 1939 thirty-four per cent of the deaths from injury occurred in the home with nearly five million being injured who did not die. According to the National Safety Council, either a driver or a pedestrian was found to have been drinking in twenty-five per cent of the cases. Four-fifths of death in automobile accidents happen at night, one-fourth of these being attributed to too much speed. Many lose their lives trying to make sure that they use their full half of the right-of-way, or a little more. About one-half the accidental deaths in the young occur in automobile accidents, young people under twenty years being the most hazardous drivers.

Accidental deaths in the home are just about equal to automobile accidents. In the home falls on levels constitute thirty-two per cent of the fatalities; falls from heights come next with fourteen per cent. Scalds and poisonous gas come in for a surprising number. Darkness where there should be light and skidding rugs take a heavy toll. A thousand people meet death by firearms in the home each year, nearly all of which could be prevented.

Farming is the most hazardous occupation when it comes to accidental death. Accidents from machinery constitute the largest number. Injuries by animals, falls and sunstroke take a large toll. Lightning, which kills five per cent of those losing their lives by accident on the farm, may not be easily prevented, but nearly all other accidents could be. Safety from accidental death is largely an individual responsibility. This is especially true of accidents on the farm. Railroads and airplanes seem to have the best records for accidental deaths of any motor-driven means of transportation.

The distribution of accidental deaths is interesting. The far west has an accidental death rate of forty-four per cent above the rest of the nation. More people die by falls in the city than in the country. More young people die than older ones in motor accidents. Workers have more accidents off the job than on it. The total cost of accidents in the United States in 1939 was estimated at $3,300,000,000.

Human safety from accidental deaths is a challenge to the medical profession. Here the challenge is largely preventive—preventive accidents, preventive medicine, and preventive surgery.

TENNESSEE PHYSICIAN MOURNED

Dr. Frank J. Runyon, 78, of Clarksville, Tenn., who died August 6, 1941. He was a native of Trenton, Kentucky. He was the son of Dr. Freeman Runyon, practicing physician, and Susan Ware Runyon. His wife, Brenda Vineyard Runyon, who died Feb. 3, 1929, held the honor of being the first president of the first woman's bank in the world.

Dr. Runyon leaves two sons, Chas. V., attorney, and Bryce F., practising physician, both of Clarksville, Tenn.

Dr. Runyon graduated with honors from the University of Louisville in 1884, from Bellevue Hospital Medical College in 1885, and took postgraduate work in New York Polyclinic in 1890 and '91.

He served as vice-president of the Tennessee State Medical Association in 1902, president of the Middle Tennessee Medical Association in 1904, president of the Tri-State Medical Association (now the Mid-South) in 1907.

Dr. Runyon possessed much originality of thought. He was a man of deep conviction.

His philosophy of life was: "Stick to your office, work hard, make your work satisfactory, and follow blindly the lead of no man".

The Mid-South feels deeply the loss of a brilliant leader in medical thought and this editor the loss of a valued personal friend.

The Alcorn County Medical Society recently had Dr. J. G. Thompson, of Jackson, as its guest speaker. The society invited doctors from the adjoining counties and the meeting was well attended. The doctors of Mississippi are delighted to see the advancement made in the field of dermatology by such men as Dr. Thompson. He has had unusually good training, one year of resident dermatology in New York City Hospital, one year as assistant to Dr. George Miller McKee, head of the department of dermatology in the Skin and Cancer Unit, Postgraduate Medical School and Hospital, Columbia University, New York. This training followed other intensive training for his specialty. Mississippi is truly marching on in medicine.

At a rather belated hour I want to pay a small tribute to the merit and memory of a friend whom I esteemed most highly—Doctor Sydney W. Johnston, of Vicksburg, who died on the twenty-ninth of May. I became acquainted with Doctor Johnston nearly forty years ago. Our acquaintance soon ripened into friendship — a friendship which was never marred by any rift or schism, but on the contrary steadily and consistently grew stronger and more sincere with the passing of years. Doctor Johnston was a unique individual with strong personal opinions, together with undaunted courage and unquestioned integrity. Those who were fortunate enough to be acknowledged as friends never had cause to question his sympathy and support. Once, long ago, I took occasion to write him asking his aid for a cause (not personal) in which I felt much interest. His reply came promptly, saying, "I know nothing of the *matter* but I do know *you* and I know that any cause that you espouse is worthy. Besides this I am your friend and you know that I would go through hell to prove it, hence, I am glad to comply with your request." The language used may have been extravagant, but I knew it came straight from the heart of a real man who was my friend indeed. He was brilliant, he was energetic, he was true and honest. What more need be said? But I do want the members of his family to know that I was his friend and as such I loved him, and that I grieve with them at his going. He was young to die, but once the "black camel must needs to kneel before every door."

* * * *

In looking back over the years that are gone, I am made happy by the realization that I have known, and possessed the friendship of, many noble men, members of my profession. A goodly number of these have passed on. But others still live to bless me with their love and confidence. I would not exchange the joy and comfort that has come to me by reason of these friendships for all the material wealth of the universe. Having paid tribute to the memory of a dead friend, I feel impelled to mention one who still lives. In the early years of my professional life I was thrown into close and frequent contact with Dr. C. T. Keys, who was born and reared in this section of Mississippi. By reason of these contacts I came to realize that he was one of "nature's noblemen," an honest man, a true friend, "an Israelite in whom there is no guile." Soon, however, by reason of ill health, he felt impelled to change his residence from the state in which he was born and reared. He moved to San Angelo, Texas, and still resides in that city. I have seen him but a few times since he went away, but there has never been a day that I did not know that he was my friend. He honored me by naming his youngest son for me. This son grew into manhood and has always been and still is his father's pride. In his senior year at Baylor he was the star of his football team, known and designated as the "plunging parson." At the close of his last game he was carried on the shoulders of his team-mates around the stadium and acclaimed the hero of the game—his father's pride, my namesake. Just a few days ago, with no intimation that he was coming, he (the son) walked into my office accompanied by a beautiful young woman whom he introduced as his wife. He said to his wife, "I am presenting you to Dad's best friend, the one that he loves best of all." I am writing this that his Dad may know how dear he is to me. To him, and all my friends, I say, God bless you.

* * * *

Seven years ago this writer had the peculiar, though unexpected and undeserved, honor to be chosen to deliver the *first* "Ewing Fox Howard" oration. Since then such outstanding men as Haggard, McLester and Abell, all being past-presidents of the American Medical Association, have delivered this address. As a climax, at our last meeting, the peerless Dr. Matas delivered it. It appears to me that the last word has been said that is necessary to express our respect for the memory of Doctor Howard. Hence I suggest that from this date, at least for a time, the address be designated as "The Charles Dennis Mitchell Oration."

Mississippi has never produced a man whose character and life-work reflected more honor on the state and medical profession than that of Charlie Mitchell. I do not hesitate to make this suggestion to the Association and especially to our president, Dr. Street, and to the members of the council. Dr. Mitchell was my classmate and my friend. I knew and loved him well. And yet I yield first place to no one in respect to the memory of Dr. Howard. Who will join me in honoring our Association by honoring the memory of Dr. Mitchell?

—G. S. B.

COMMONWEALTH FUND

July 1, 1941

Dr. Felix J. Underwood
State Board of Health
Jackson, Mississippi

Dear Dr. Underwood:

You will recall that we had some difficulty in finding enough qualified physicians interested in fellowship work at Tulane to fill the quota of fellowships available from the Commonwealth Fund for this purpose during the present year. It occurs to me, therefore, that in view of the general shortage of physicians created by the national emergency, we should begin at this time to give publicity to these fellowships.

The Commonwealth Fund expects to make available in 1942 to physicians in Mississippi a limited number of fellowships for review courses to be taken at Tulane University Medical School in (1) medicine (2) surgery and (3) gynecology and obstetrics. These fellowships will be made available to physicians who are graduates of class A medical schools doing general practice in the smaller communities over the state, preference being given to those under 50 years of age. Each of the courses during the coming year will be of six weeks' duration. Physicians may apply for any one or two of the three courses. The first course will begin on Monday, January 5, 1942. Those awarded fellowships will receive a stipend of $250 per month, plus a refund of tuition, and travel expense from Mississippi to New Orleans and return. Interested physicians should make application directly to the Commonwealth Fund at 41 East 57th Street, New York City.

Sincerely yours,
Harry E. Handley, M.D.

GUEST SPEAKER

Dr. James T. Nix, of New Orleans, who will be the out-of-state essayist at the next meeting of the Northeast Mississippi Thirteen Counties Medical Society, which will meet in Aberdeen on Tuesday, September 9. This is known as the G. S. Bryan meeting whether it be at Amory or Aberdeen. We congratulate him on securing Dr. Nix as the lecturer of the occasion. He has had at these meetings some of the biggest medical men in the United States. It has not been long since Dr. George W. Crile, of Cleveland, was the speaker.

Any person who spends a little time in New Orleans can soon feel the inspiration of Dr. Nix's medical enthusiam in the atmosphere. It is also certain that his great physical energy is driven by great power of purpose. His surgical soul glows with unusual warmth. He is professor of clinical surgery at the Louisiana State University School of Medicine, New Orleans. He has served as director of the Oscar Allen Tumor Clinic, dean of the Graduate School of Medicine, Louisiana State University, and medical adviser of the Catholic Hospital Association of America. He served in the World War as first lieutenant.

His book, "A Surgeon Reflects," is interesting, informative and inspiring. While we congratulate Dr. Bryan, we look forward with much anticipation to hearing Dr. Nix at our next meeting at Aberdeen.

WANTED—A pair of old medical saddle bags. Write Dr. R. H. Miller, Assistant Dean, University of Tennessee College of Medicine, Memphis, Tennessee.

Military Section

CONTROL OF ANIMAL AND PLANT HAZARDS

1. *Introduction.* The mild climate, sparse population, abundant swamp land and uncontrolled animal and plant life of the DeSoto National Forest and neighboring areas make this region a haven of all plant and animal life that prefers this environment. Whether these plants and animals be beneficial or harmful to human beings is given no consideration in nature's arrangement. The result is a moderate number of harmful and poisonous animals and plants. Of these the troops must take careful cognizance if their training is to proceed in this area with safety and high efficiency.

This memorandum calls attention to most of these animal and plant hazards in an effort to educate the troops to recognize promptly the harmful agent, to protect themselves against it and to treat themselves properly if harmed by it. This knowledge should make each man feel confident of his ability to care for himself and dispel any fear engendered by ignorance.

2. *General Considerations.* Most harmful agents whether plant or animal will be found on or near the ground, often concealed under dead or live vegetation. Therefore men should not plunge blindly into vegetation or rubbish, with hands or feet, without a quick inspection of the area. Bare hands should not be thrust into rubbish piles or underbrush without first exploring them with a stick or similar instrument. Shoes and leggings should be worn at all times on field duty. Do not handle any insects, snakes, or wild vegetation unless familiar with the dangerous varieties—then still do not handle them! On leaving bed at night, inspect the floor with a light. Never leave the bed without shoes. Remove grass and thick brushes for four or five feet around the tent. Keep away from frog and rat infested spots. They attract snakes.

3. *Animal Hazards—Snakes.* Many varieties of snakes inhabit this area. Most of them are harmless such as the bull snake, king snake, black runner, pine snake, chicken snake, water snake, etc.

The snake season is from about March 1 to November 1. Snakes hibernate during the remainder of the year, therefore they will be encountered during hibernating season usually when their hibernating places are disturbed by digging, blasting, turning over rocks, old timbers, disturbing old building foundations, etc.

The peak of snake season, numerically, is probably in August.

In general, poisonous snakes have a triangular shaped head, with the tip of the nose as an *apex* and the jaw muscles, the *base.*

Blackberry bushes are a common habitat of snakes, especially cotton mouth moccasins. Many people have been bitten picking blackberries in June. The harmful snakes are of three kinds, rattlers, moccasins and coral snakes. These we will consider in more detail.

(1) *Rattlers.* Three kinds of rattlers are found in this area, the diamond back, ground rattler and occasionally the canebreak rattler, or southern banded rattler.

The canebreak rattler, or southern banded rattler, is very poisonous but does not move much until from June to August. It feeds at night. The diamond back rattler is so named because of the diamond shaped configuration of its back pattern (See Demonstration of Harmful Plants and Animals at 37th Division Club). It is a fighter and ground rattlers cannot bite through boots or thick canvas leggings if the latter are worn over high shoes. They are most common in the hill land. The diamond back is probably the most dangerous reptile in the area, adults being from four to eight feet long. There are very few deaths following the bites of either of these snakes in proportion to the number of people bitten. The amount of poison or venom possible to be injected by the bite is directly proportional to the size of the snake, and inversely proportional to the number of recent strikes made by the snake.

(2) The cotton mouth *moccasin* is most common in the bottom lands, but it also occurs in the hills. This snake has a very foul odor. It is usually found near pools or streams and if given a chance will usually get out of one's way. It rarely attacks unless molested, such as being stepped on, etc. The copperhead moccasin is very plentiful and may be found anywhere. It is poisonous but no deaths have been reported from its bite. It does not attack, is sometimes spoken of as the 'spread head adder,' will commonly feign death and spread out flat on the ground for the purpose of deceiving one. It feeds in the daytime and will often take to water.

(Note—The above varieties, rattler and moccasin, belong to the Pit viper family (Crotalidae). Their venom or poison attacks red blood cells and blood vessels. The third variety, coral snake, belongs to the Cobra family (Elapidae) and its poison attacks the nerve centers.

(3) The *coral snake* is a slender, smooth and glossy reptile, seldom over two to two and one-half feet long. It is beautifully colored, with black and yellow or black, red and yellow bands or rings. The head is not distinct from the neck. The variety with a black nose is most poisonous. It is a burrowing reptile but may occasionally be found prowling. It is a night feeder and seldom seen. It is often undemonstrative when disturbed, may be handled for a half hour or hour, then suddenly bite. It does not strike but apparently chews its vic-

tim, is hard to tear loose and makes many puncture wounds with its short, rigid fangs. Several different color arrangements or rings of red, black and yellow may be found in the coral snake group. Some are thought to be non-poisonous, but authorities disagree on the matter. It is wisest to let them all alone.

(4) Precautions regarding the snake menace have already been mentioned. As to the treatment, this is of two types: emergency first aid and serum, or "antivenin" treatment.

(a) *First Aid Treatment.* Since bites are most often on an extremity, application of a tourniquet is immediately indicated. This is available in all medical belts or pouches or may readily be made from a necktie, handkerchief or piece of cloth, hat cord, rope, rubber, etc. This should be loosed at intervals of 20 or 30 minutes, sufficient to prevent gangrene of the limb.

The wounds of the fang punctures should be located and the skin around them cleansed with 5% solution of permanganate of potash if available, alcohol or iodine. If practicable excision of the area to the depth of the fang would be advisable. If impracticable, the fang punctures should be opened with a sharp cutting instrument, a razor blade, or with a sharp, sterile surgical knife (if available), care being taken not to cut the delicate skin covering of a bone or to cut into a blood vessel. The cuts should be made to the depth of the fang wound, an estimated depth of $\frac{3}{8}$" for a large rattlesnake bite and $\frac{1}{4}$" for a copperhead. A crucial incision should be made about $\frac{1}{2}$" over each fang puncture. These should be increased in number if absorption of poison is indicated by the increasing shock and weakness of the patient or increasing local swelling.

Washing of the incised wounds with a 5 per cent aqueous solution of permanganate of potash will aid in neutralizing the venom. Stronger solution of $KMn0_4$ is not advisable because of its destructive effect on tissues.

Suction should be applied at once. Each aid station should have an emergency suction outfit ready at all times for immediate use. One can be made with three or four medicine glasses and some absolute alcohol or 70 per cent alcohol. Suction may be created by filling a glass with alcohol then pouring it out and setting fire to that retained in the glass. This heated glass is inverted over the area involved as other glasses are prepared. Syringe suction kits have been devised for C. C. C. and W. P. A. service and are good, if available.

If no mechanical suction devices are at hand, suction by placing the mouth over the area may be used, if there are no open sores in or about the mouth. The venom is not harmful if swallowed. Suction should be maintained at least 30 minutes.

Artificial respiration may be needed in case of extreme shock or in the cases of nerve affecting (coral) snake bite.

(b) Absolute rest, shock treatment, and hastened procurement of antivenin from the nearest drug supply are next steps. Medical officers should anticipate the problem and know the nearest supply point, both civil and military, for antivenin. If possible, immediate transportation by ambulance, of the patient to the camp hospital, may be made during the application of suction. Antivenin is available there.

The dosage and method of administration of antivenin depends upon the size and type of snake, location of the bite and time interval between the bite and administration of the serum. It is important that the victim or his companions obtain this information. These factors must be weighed by medical officers, all of whom should familiarize themselves with antivenin treatment. Literature on this subject is available from the Antivenin Institute of America, Glenolden, Pa., or the Mulford Biological Laboratories.

II. The following information has been furnished by the camp veterinarian regarding prevention of rabies at Camp Shelby.

1. Since May 10, two instances of military personnel bitten by dogs have been reported to this office, in neither of which has it been possible to place the offending animal under observation. Wherever animals cannot be quarantined subsequent to inflicting injury by biting, it is necessary to give the bitten individual anti-rabies treatment for his protection, in the absence of conclusive knowledge that the dog was not in the infective stage of rabies at the time the bite was sustained. In those cases where the animal concerned can be placed under restraint and examined daily for fifteen days, such protracted and painful treatment will be unnecessary unless clinical symptoms of rabies have been shown during this period, by the animal under observation.

2. The following precautions are recommended to prevent bites, and to protect the individual if bitten.

a. Beware of the stray dog, especially if any abnormality in gait, facial expression or voice is noted.

b. Every dog seen frothing at the mouth is *not* a mad dog. Conditions which may cause the frothing are, extended running, ordinary convulsions or "fits," or nausea.

c. The rabid dog usually travels in a fairly straight line, snapping or snarling at any obstacles in his path. His facial expression is one of marked anxiety or fear, and in the latter stages of the disease, the lower jaw hangs open due to paralysis of the muscles controlling it. At about this stage in the progress of the disease, muscular incoördination is shown, making the animal unable to "track." The bark is peculiarly short and high pitched.

d. Do not allow dogs, especially strays, to lick the hands, and particularly the face, as it is not necessary for a bite to be given, to infect with rabies. The rabies virus exists in the saliva, and may gain entrance to the body through a very slight scratch or abrasion. In one type of rabies, the afflicted animal is quiet and seems to show more affection than usual.

e. Any suspiciously acting animals should be reported to the division or camp veterinarian, and if possible be confined pending examination by veterinary personnel.

f. In the event that a soldier is bitten the dog should be secured, especially if a stray, or unvaccinated, and kept under observation for a period of fifteen days. Under no circumstances should an animal be destroyed subsequent to biting anyone, as this action makes the administration of anti-rabies treatment mandatory.

g. As all mammals are susceptible to rabies, great care should be exercised in capturing and handling wild animals intended for taming as pets, such as squirrels, foxes, raccoons, etc.

THOMAS L. FERENBAUGH, Colonel,
Medical Corps, Camp Surgeon.

MILITARY PERSONNEL AT CAMP BLANDING, FLORIDA

The following officers who are Mississippi physicians are located at Camp Blanding, Florida, and are now making their movement into Louisiana for the summer maneuvers. These doctors are giving freely of their time at a great sacrifice to themselves and families in order that they may aid in adequately training the Army for defense or offense duties which may arise.

Name and Rank	Address	Organization	Component
Lt. Col. John E. McDill	Jackson, Miss.	160th Med. Reg.	N. G.
Lt. Col. James H. Fox	Jackson, Miss.	106th Eng.	N. G.
Lt. Col. Hugh L. McCalip	Yazo City, Miss.	106th Q. M.	N. G.
Maj. Robert W. Smith	Canton, Miss.	155th Inf.	N. G.
Maj. George W. Eubanks	Greenville, Miss.	114th F. A.	N. G.
Capt. Thomas A. Baines	Jackson, Miss.	106th Med. Reg.	N. G.
Capt. Eugene A. Bush	Laurel, Miss.	106th Med. Reg.	N. G.
Capt. L. B. Hudson	Hattiesburg, Miss.	106th Med. Reg.	N. G.
Capt. Chas. R. Jenkins	Ellisville, Miss.	106th Med. Reg.	N. G.
Capt. Frank L. Ramsay	Laurel, Miss.	106th Med. Reg.	N. G.
Capt. Howard S. Williams	Jackson, Miss.	106th Med. Reg.	N. G.
Capt. Henry C. Dorris	Winona, Miss.	155th Inf.	N. G.
Capt. Nathan F. Kendall	Jackson, Miss.	155th Inf.	N. G.
Capt. Wm. E. Noblin	Jackson, Miss.	155th Inf.	N. G.
Capt. Robert B. Ray	Kosciusko, Miss.	155th Inf.	N. G.
Capt. James H. Armstrong	Oxford, Miss.	106th Q. M.	N. G.
Capt. Thomas Purser, Jr.	McComb, Miss.	106th F. A.	N. G.
Capt. Oscar W. Bolton	Biloxi, Miss.	114th F. A.	N. G.
Capt. Walter E. Johnston	Vicksburg, Miss.	155th Inf.	N. G.
1st Lt. Rufus K. Simpson	Macon, Miss.	106th Med. Reg.	N. G.
1st Lt. Benjamin F. Hand	Greenville, Miss.	114th F. A.	N. G.
1st Lt. Roland D. Lamb	Columbus, Miss.	114th F. A.	N. G.
1st Lt. John Williams	Greenville, Miss.	C.A.S.C.	Res.
1st Lt. L. B. Merriam	Waynesboro, Miss.	C.A.S.C.	Res.

News and Comments

The third international assembly of the International College of Surgeons will be held at the Reforma Hotel in Mexico City, August 10 to 14, inclusive. A very interesting program has been arranged.

The 1941 annual meeting of the National Society for the Prevention of Blindness will be held in New York City, December 4 to 6. For further information write Mrs. Eleanor Brown Merrill, Executive Director, 1790 Broadway, New York City.

Dr. Boyd C. Edwards, formerly of Edwards, Mississippi, announces his association in the surgery of Dr. Lawrence W. Long. Dr. Edwards will confine his work to medicine and obstetrics. He has recently completed a postgraduate course at Tulane University, New Orleans, La.

Dr. Steve W. Coley, of the Methodist Hospital, Memphis, Tenn., announces the association of Dr. Van A. Odle, Washington, D. C., in the practice of radiology. Modern equipment available for x-ray diagnosis and all types of deep x-ray and radium therapy.

The American Neisserian Medical Society announces an annual prize of one hundred dollars, to be known as the P. S. Pelouze Award, to be presented to the person under thirty-five years of age who, in the opinion of the Committee of Awards, has made the outstanding contribution to the control of the gonococcal infections during the preceding year.

The Association of Military Surgeons will be held at Louisville, Kentucky, and at Fort Knox, October 29 to November 1. The surgeons general of the Army, the Navy and the Public Health Service are expected to be present, also the medical director of the Veterans Administration, along with other distinguished guests of the medical and dental world. The program will consist of discussions of vitally important aspects of medical defense.

The seventh annual meeting of the Mississippi Valley Medical Society will be held at Cedar Rapids, Iowa, Oct. 1, 2, 3, 1941, at Hotel Montrose. The program will be given by thirty clinician-teachers who will give over forty lectures, demonstrations, round-table discussions, etc. Further information may be secured from the secretary, Harold Swanberg, M.D., W.C.U. Bldg., Quincy, Ill.

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Examinations for three types of medical positions in the Government service have been announced by the Civil Service Commission. Junior medical officer positions at $2,000 per year will be filled at St. Elizabeth's Hospital in Washington, D. C., medical technical assistant positions at $2,000 per year and medical guard-attendant positions at $1,620 per year. Further information and application forms may be obtained at any first or second class post office or from the Civil Service Commission in Washington. Qualified persons are urged to file their applications at once.

Dr. Robert B. Lewy, of Chicago, Attending Staff, St. Joseph and Chicago Memorial Hospitals, is the winner of the Annual Essay Contest of the Mississippi Valley Medical Society. His subject was "Comparative Studies in Pain Control." Dr. George A. Skinner, of Berkeley, Cal., won second and Dr. Arthur Bowen, of Los Angeles, third. The winner receives a $100.00 cash prize, a gold medal, a certificate award, and an invitation to present his essay before the annual meeting of the Mississippi Valley Medical Society. Another contest will be conducted next year.

The importance of having the physician prescribe the proper diaphragm is stressed in a booklet, addressed to pharmacists, by the Holland-Rantos Company entitled "The Pharmacist Looks at Contraceptives."

The Holland-Rantos Company are the pioneers in advocating the diaphragm plus jelly method and have consistently maintained that diaphragm must be properly fitted by physicians.

This monograph is the latest promotion done by the company in its advocacy of "The Physician's Method."

Dr. John C. Goudelock, prominent Union County physician, died at his home in Keownville, Thursday, July 24, of a heart attack. Dr. Goudelock was 58. A native of Keownville, he had practiced medicine in Union County for many years. He was a graduate of the old University of Nashville Medical School. He was a Mason and a steward in the Mt. Olive Methodist Church. He is survived by his wife, Mrs. Lillie Shaw Goudelock, a son, Dr. Leander Goudelock, of Bruce, two daughters, Vernis and Doris, both of Keownville, and two brothers and three sisters.

Funeral services were held for Dr. Wiley Sharp Cranford on June 23, 1941, at the Methodist church at Ellisville, Miss. Dr. Cranford was 59. He had been ill for quite a while. He attended the University of the South, at Sewanee, Tenn., and received his degree from Tulane University. Dr. Cranford had been county health officer of Jones County and house physician at the Ellisville state school and was a member of the Ellisville city school board at the time of his death. He is survived by his wife, Mrs. Eva Trest Cranford, three daughters, two sisters and one brother. Interment was in the Ellisville city cemetery.

Dr. Estelle Magiera, well-known Mississippi phychiatrist, has been appointed assistant to Dr. W. E. Noblin, Hinds County health officer. Dr. Magiera has just completed a three months' public health training at the Lauderdale County training center and subsequent observations of mental hygiene programs over the United States. She served as psychiatrist for two years and on the staff of the state hospital at Whitfield. During the past week Dr. Magiera has been observing the Southard institute of mental hygiene; also in Connecticut, New York and New Orleans.

An examination for dental hygienists is being announced, this time on an "open continuous" basis. Salary is $1,620 per year, less the usual 3½ per cent retirement deduction. Hygienists assist dental surgeons in hospitals, clinics, and relief stations. Appointments will be made in the U. S. Public Health Service, the Veterans' Administration, and the War Department. To qualify, applicants must be *registered* dental or oral hygienists who have completed a full course leading to graduation from a recognized school of oral hygiene. In addition, two years of experience are required in oral hygiene in public health or school work or in a private ethical dental office. Graduate dentists will be accepted if they have had the oral work in hygiene. Persons interested are urged to file their application with the Commission's Washington office immediately.

Dr. R. C. Elmore, prominent physician of Durant, died at a hospital in Jackson, July 26. Dr. Elmore was born March 18, 1877, in Kentucky. His parents moved to Mississippi when he was quite a young man, and settled in Holmes county, where he spent the remainder of his life. He was graduated from Mississippi State College and received his M.D. degree from Vanderbilt University. His first practice was at Black Hawk, moving to Durant in 1903. He was a member of the Methodist Church, the American Legion and the State and American Medical Associations, and was active in the social and civic life of the town. Dr. Elmore is survived by his wife and two daughters, Mrs. Henry Gwinner of Birmingham, and Mrs. George Povall, of Lexington, two grandchildren, Elmore and Gretchen Povall; two sisters and one nephew. Funeral was held Sunday at the Methodist Church with interment in Mizpah cemetery.

Book Reviews

Synopses of various groups of diseases have been published for two or three years by the C. V. Mosby Company. This has been a great service. It is very convenient to have the last word by an authority on a subject, to have the information in concentrated form and well arranged for handy reference. The medical profession appreciates this service on the part of this great publishing company. The most recent of these synopses that has come to our desk is the one by Dr. George R. Herrmann, Professor of Medicine, University of Texas, entitled SYNOPSIS OF DISEASE OF THE HEART AND ARTERIES. It is a second edition. It is dedicated to Drs. Henry A. Christian, George

Dock, Frank N. Wilson and Rudolph Matas. It is an index epitome of the modern conceptions and principles in the practice of cardiology. Special emphasis has been placed on diagnosis and treatment of cardiovascular disease. Much new material has been added in the second edition. One of the most valuable and timely additions is the chapter on methods advocated by military authorities in the examination of recruits for the army. Another chapter most interesting and helpful deals with cardiovascular disease as it relates to surgical treatment and obstetrical management.

This is a book of 468 pages and is well bound. The price is $5.00, from C. V. Mosby Company, St. Louis, Mo.

X-RAY THERAPY OF CHRONIC ARTHRITIS, (including the x-ray diagnosis of the disease), is a new book just received from the publishers, Radiologic Review Publishing Company, Quincy, Illinois, which sells for $2.00. This book on the x-ray treatment of chronic arthritis is a very valuable addition to medical literature. Any suggestion that may help to alleviate the pain of this terrifying disease will be highly welcomed by the 7,000,000 people who suffer with this chronic ailment. The book is comprehensively illustrated by x-ray pictures of chronic cases, and physicians will find it a valuable aid in the treatment of arthritis. The splendid illustrations in the book showing the joints of the human body where this disease lurks gives a new slant on the diagnosis and treatment which will be a fine help to physicians.

AN INTRODUCTION TO DERMATOLOGY by Richard L. Sutton, M.D., Sc.D., LL.D., F.R.S. (Edin) Emeritus Professor of Dermatology, University of Kansas School of Medicine and Richard L. Sutton, Jr., A.M., M.D., L.R.C.P. (Edin) Assistant Professor of Dermatology, University of Kansas, School of Medicine. Fourth Edition. Published by the C. V. Mosby Company of St. Louis, 1941. Price $9.00.

The 1941 edition of this well-known book on diseases of the skin has several innovations which have increased the value of the book considerably. A rather complete bibliography has been added for those who desire further study into any certain topic. Illustrations have been stressed and the number used has been more than trebled. The various diseases are classified by their relations to each other as nearly as possible. The book contains a review of dermatology sufficient to give the practitioner a working background for this field, which frequently presents such puzzling problems for diagnosis and treatment. It is to be recommended.

INFANTILE PARALYSIS is the title of a new publication on that disease. It is published by The National Foundation For Infantile Paralysis, Inc., 120 Broadway, New York City, and consists of nearly 250 pages. It is a symposium of six lectures sponsored by the Foundation and delivered at Vanderbilt University in April of this year. Each lecture was delivered by a well known and recognized authority, and taken together they compose a book of valuable merit and information. It is shown that about 4500 cases are reported each year, with the peak year of 1916 reaching 27,363 cases, and the total number from 1916 through 1938 reaching 176,369. Of this large total it is estimated that from 30 to 60 per cent of the victims will be permanent cripples. In this book the history of infantile paralysis is fully covered and also every phase of the disease is comprehensively discussed. This book contains information and suggestions which are highly valuable to every physician. This peculiar and unpredictable disease is liable to strike any time and any place and any human being, but usually children, may be its shining mark. Whatever the practitioner is able to do to aid victims of infantile paralysis to a normal life yields returns a thousandfold. This little group of treatises is well worth the $1.25 which the book costs.

ESSENTIALS OF ENDOCRINOLOGY by Arthur Grollman, Phd., M.D., Associate Professor of Pharmacology and Experimental Therapeutics in the Medical School of the Johns Hopkins University, formerly Associate Professor of Physiology and Instructor of Chemistry in the same institution. Price $7.00.

Endocrinology, though a relatively new science, is rapidly taking its true position as one of the fundamental sciences. However, due to the rapid strides, profuse amount of literature, and confusing nomenclature, this field has been very confusing to those who desire to have a working knowledge of the subject. This is a timely book as it has as its purpose to bring together into a single volume the vast subject matter dealing with the hormones. The author has attempted to present a critical evaluation of all important aspects of the subject. Clinical endocrinology is often befuddled by accepting as facts unproved assumptions and thus establishing a maze of fanciful and ill-founded conjectures. When reduced to its experimentally established facts, clinical endocrinology is based on observations in human disease, and it is impossible to dissociate experimental from clinical endocrinology. The author has tried to correlate and cover both aspects of the matter as completely as possible in this size volume. This book is of value for those who wish to obtain some clear idea of the status of clinical endocrinology as it exists today.

PROCTOLOGY FOR THE GENERAL PRACTITIONER. by Dr. Frederick C. Smith, is a most practical book published by the F. A. Davis Company, Philadelphia. It is a book of 466 pages illustrated with 161 half-tones and line engravings and five color plates. It is in the second edition, which has been largely rewritten and amplified. Proctology is an important but neglected field in medical practice, especially for the general practitioner.

The book is divided into 22 chapters. The causes of rectal bleeding is given liberal space and is an important discussion. Pre- and postoperative treatment constitute a helpful chapter. The cause, diagnosis and treatment of pruritis ani will be appreciated by all practitioners. In one chapter an illuminating discussion is given on the symptoms, diagnosis and treatment of intestinal parasites. The definition, cause and treatment of constipation will offer new help also to the doctor.

Wounds, injuries and rupture of the rectum are discussed in relation to cause and treatment. The solution of the everyday complaint of flatulence, which the doctor is called to treat every day, is managed with proper food. It seems that every practitioner would find something helpful in this book in his daily practice.

EFFECTIVE LIVING is the title of a challenging new book by C. E. Turner, Professor of Biology and Public Health, Massachusetts Institute of Technology, and published by the C. V. Mosby Company, St. Louis, Missouri. The price of the book is $1.90. This book covers the common problems of life in a general way. It deals comprehensively with the human body, its ailments, its functions and its highest developments. Due consideration is given to diet, hygiene, infant life, the family unit, and also the history of disease and the germs that cause the afflictions. It is illustrated by many timely and useful pictures. This book is interesting to the average layman and a veritable storehouse of information for the physician. Its simple yet persuasive language is bound to impress the reader with its superior merit. Its discussions are so clearly and understandingly presented, one cannot forget them. EFFECTIVE LIVING will be a valuable addition to any medical or lay library. Its well written pages and its 164 illustrations have a strong appeal to any reader.

ORBITAL TUMORS. By Dr. Walter E. Dandy, Adjunct Professor, Neurological Surgery, Johns Hopkins University. Published by Oskar Piest, New York City. Price $5.00. 168 pages.

This is a small book written by Dr. Dandy of Johns Hopkins. Although small in size the book is rich in content. The author presents 29 complete case histories of orbital tumors. Each case is complete with photographs of patients, microscopic drawings, x-ray pictures, and many other illustrations. The outstanding feature of the book is the fact that the author shows that about 80 per cent of orbital tumors are not limited to the orbit but extend intracranially, and for that reason the author employs the transcranial operative attack. He uses a concealed hypophyseal incision and is able to remove most tumors even though they extend beyond the orbit. The technic of the operation is described in detail. The book is most interesting, is well written, is easy to read and we recommend it most heartily to those interested in the subject of orbital tumors.

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Organized 1867 **Next Meeting: May 12, 13, 14, 1942, Jackson**

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COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	W. R. Brumfield, Gloster	Anderson Butler, Liberty	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. A. Slack, Friars Point	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	C. A. Kirk, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	T. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	H. L. Scales, Jr., Starkville	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
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Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
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Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat — Alston Callahan, Vicksburg.

Eye—S. S. McNair, Jackson.

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Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

PEDIATRICS

MANAGEMENT OF NUTRITIONAL ANEMIA OF INFANCY, K. L. McAlpine, Canadian Medical Association Journal, 44:386 (April, 1941).

In this article the author deals only with nutritional anemia of infancy. This is commonly referred to as iron-deficiency or hypochromic anemia, and, for this reason, the author states that the management of such anemia should be directed toward correcting the iron deficiency.

It is a well known fact, to which this author agrees, that the hemoglobin content at birth is high and is followed by a rapid destruction of red blood cells with a consequent fall in hemoglobin in the newborn period. The low hemoglobin reached in the second month is the so-called 'physiological anemia,' after which there is a gradual rise in hemoglobin during the third and fourth months, with a more rapid increase from the fourth to the sixth. A reduction of hemoglobin follows from the sixth to the twelfth month; then again in the second year it rises slowly until normal values are reached, attaining the adult level at adolescence. The author brings out the fact that an average hemoglobin of seventy-five per cent is considered normal for infants under two years of age.

For the treatment of such anemia, he recommends iron and ammonium citrate and copper sulphate in a preparation consisting of 10 grains of iron and ammonium citrate and 1 64 grains of copper sulphate. A few drops, gradually increased to one dram, three to five times daily are usually well tolerated. Doses much in excess of this may be employed. He seems to favor syrup of ferrous chloride on account of its rapid effect and utilization; however, he speaks of it as not a very palatable preparation and cannot be placed in milk feedings because of curdling. He suggests that the saccharated ferrous carbonate is widely and conveniently used in tablet or powder form and may be given in milk, cereal, or fruit juices. Although iron is considered foremost in the treatment of nutritional anemia, diet is essential. He emphasizes the important fact that over-indulgence in milk should be curtailed and solid foods added to the diet early. Liver is considered one of the most important foods in the prevention and treatment of nutritional anemia, but, in the severe degrees of anemia, he advises the use of transfusion.

COMMENT: This is an extraordinarily good article and it is hoped that this abstract may be read by all practitioners of medicine.

—H. F. G.

SURGERY

DIAPHRAGMATIC HERNIA, S. Allen Wilkinson and Herbert D. Adams, Abstracted from Surgical Clinics of North America, June, 1941.

Diaphragmatic hernia is defined as a protrusion of a part or all of one or more abdominal viscera through the diaphragm into the pleural cavity. In general there are two types of hernia, those in which the site of the protrusion is at the esophageal hiatus and the most common and the less common types in which there is a rupture in the leaf of the diaphragm at some distance from the esophageal hiatus and usually due to trauma. It is in the latter group that often the entire stomach and portions of the colon or small intestine may occupy the hernial cavity. Many of the small herniae of the stomach are asymptomatic. However, the usual symptoms simulate those of peptic ulcer, chronic cholecystitis, and functional disorders of the colon. Sixty per cent of the cases were diagnosed as peptic ulcer. In 15 per cent of these cases of diaphragmatic hernia, a peptic ulcer, either in the stomach, duodenum or esophagus, occurred.

In mild symptomatic cases the treatment consists of bland, low-residue diet, anti-spasmodics and aluminum hydroxide. In those cases in which there is an associated peptic ulcer, routine ulcer management is usually sufficient to control symptoms. Persistent hiccoughs is completely controlled by section of the left phrenic nerve. Surgical intervention is indicated in bleeding, obstruction, and marked interference with function and the associated malnutrition and those uncomplicated cases in which the symptoms are not relieved by medical measures. The operation of choice is repair of the diaphragmatic hernia by the abdominal approach. The transthoracic approach should be reserved for those rare cases in which reduction could not be accomplished from below the diaphragm.

CARDIOSPASM, Walter B. Hoover, Abstracted from Surgical Clinics of North America, June, 1941, Lahey Clinic Number.

Cardiospasm is defined as a functional fibrotic, or mechanical stenosis of the lower end of the esophagus, with associated dilatation and hypertrophy of the esophagus above the stenosis, and accompanied by dysphagia. The etiology is not known, however, functional and organic possibilities are discussed. Cardiospasm is found equally frequently in the two sexes, the onset of symptoms is most common in the third, fourth and fifth decades. The most common symptoms are dysphagia, regurgitation and loss of weight. The less common symptoms are pain, laryngeal irritation, bleeding and toxic absorption from the esophagus with fever and general malaise. A diagnosis of the esophageal lesion is made by (1) the history, (2) fluoroscopic and roentgenologic examinations, with its characteristic smooth conical constriction at the lower end of the esophagus and the dilated esophagus above, and (3) by the esophagoscopic examination.

Treatment of cardiospasm with satisfactory results is obtained by dilatation and dietetic management in approximately 90 per cent of cases, and in from 20 to 25 per cent there may be no recurrence of symptoms for several years. Periodic dilatations are required in from 60 to 70 per cent of cases. In about 10 per cent of cases surgical intervention can now be recommended to enlarge the narrow passage from the dilated esophagus to the stomach.

EXPERIMENTAL STUDIES ON ALIMENTARY AZOTEMIA, I. Role of Blood Absorption from the Gastro-Intestinal Tract, C. Frank Chunn, M.D., and Henry N. Harkins, M.D., Surgery. 96:695-705, May, 1941.

Intragastric administration of whole blood in 12 experiments on 6 dogs caused a uniform and considerable rise in the blood urea nitrogen. It was found that from 3 to 7 hours after the administration of usually 200 cc. of blood by stomach tube a definite elevation of blood urea nitrogen was present. In experiments in which the dogs received larger amounts of citrated blood in divided doses the maximum blood urea nitrogen concentration was obtained in anywhere from 5 to 19 hours, depending on the amount of blood and the number of doses. The return to normal after the maximum blood urea nitrogen concentration was reached occurred in 24 to 36 hours.

The increase seemed due primarily to absorption of digested blood. No evidence of starvation, dehydration, anemia, hypochloremia or shock was present in these dogs to explain the phenomenon. The term alimentary azotemia is proposed for this condition and it seems logical to assume that much of the rise in blood urea nitrogen observed in clinical cases of bleeding peptic ulcer is due to the same phenomenon.

—C. FRANK CHUNN.

State Board of Health

Felix J. Underwood, M.D.

DECREASING INCIDENCE OF MALARIA

by NELSON H. RECTOR

Assistant State Director, Malaria Control

Malaria, like many diseases, follows a definite cycle. In the past our records have shown that in Mississippi the average length of time from one peak to the next has been seven years.

It is interesting to note that from 1933 through 1940, this disease has failed to follow this typical pattern. During this particular period the number of deaths from malaria in Mississippi has constantly decreased from 695 in 1933 to an all-time low of 168 in 1940.

In the opinion of the State Board of Health many factors have contributed to this steady and rapid decline. One of these factors is the relatively large amount of primary and secondary roads constructed in Mississippi during this period on which all borrow pits were drained. This accomplishment was made possible by the excellent coöperation of the State Highway Department. In many instances, the highway construction actually improved conditions by eliminating natural water areas. It can also be stated that the malaria control drainage work carried on through the different federal relief programs, especially the Works Progress Administration, has had an effect on the incidence of this disease. During the last eight years, breeding areas of the Anopheles mosquito have been eliminated in 225 towns in 76 counties, affecting more than 30 per cent of the general population.

Since May, 1936, a rather large part of the W.P.A.-State Board of Health Malaria Control Program in Mississippi has consisted of one construction of concrete ditches, the laying of underground tile or drains, and the filling of swamps and ponds for the elimination of mosquitoes. During this period, approximately 200 miles of concrete ditch have been constructed in 163 towns in 67 counties on this program. In a number of towns at least 75 per cent of the area that formerly bred mosquitoes has been eliminated by this concrete construction. There is no doubt but that this permanent work has prevented many cases of malaria.

OUTLOOK FOR FURTHER CONTROL

Drainage of ponds and swamps which provided breeding places for mosquitoes involved in the transmission of malaria has been recognized by leading authorities of malaria control as the best method for the control of this disease, and it is believed that in urban areas the permanent ditch construction is by far the best method. As the malaria mosquitoes have a flight range of approximately one mile, it is planned to carry on this work in towns, cities, and thickly settled communities and in territory not to exceed one mile from these areas of habitation.

It is particularly essential that this work be done in cantonment areas. A large majority of the troops stationed in the present cantonment areas come from non-malarious localities. It is a well-known fact that persons who have never lived in a locality where malaria is endemic generally suffer more acutely than natives of such a region. Defense plans call for approximately 60,000 men at Camp Shelby in Forrest County, 3,000 at each of the air bases in Jackson, Meridian, Columbus, and Greenville, and 25,000 men at the projected Biloxi Air Corps Technical School. Additional hundreds of non-native population are employed in the industrial area of Pascagoula. The entire Gulf Coast is a recreation area for military personnel. To protect approximately 100,000 susceptible individuals now quartered or soon to be quartered in the state, it is urgent that all of these areas where military personnel are stationed or where they go for vacations be free of the mosquito which transmits malaria.

While it is true that the malaria incidence in a number of these counties has been relatively low for the past seven years, it is the opinion of the State Board of Health that a more or less serious malaria problem may develop in these cantonment areas unless steps are taken immediately to eliminate the Anopheles mosquitoes. Officials of the State Board of Health have found Anopheles mosquitoes breeding in many areas in these sections of Mississippi. In fact Anopheles larvae were found in the area in and adjacent to Camp Shelby and the air bases in Meridian and Jackson. A part of the troops stationed in the present camp areas come from the Southern states and would no doubt provide the infection for the mosquitoes. It is believed that a bad situation might result if steps are not taken to control mosquito breeding.

The United States Public Health Service, War Department, Works Progress Administration, and the State Board of Health have made plans to carry on effective larvicidal mosquito control work in all cantonment areas in Mississippi and in adjacent territory within one mile of the troop barracks. In addition, the W. P. A. has already begun work on the construction of concrete inverts in Camp Shelby in order to eliminate mosquito breeding and thereby provide more effective control and at the same time obviate the need for oiling. The W. P. A. has also constructed a small amount of invert in the vicinity of Key Field in Meridian and plans are being made to extend this permanent malaria control program in Meridian. Plans have been presented to the W. P. A. for the construction of concrete inverts in the vicinity of the Jackson Air Base.

It is hoped that within a year's time a relatively large amount of concrete inverts can be constructed on the W.P.A.-State Board of Health Malaria Control Program in the cantonment areas and territory adjacent thereto, making possible a continued reduction in cases and deaths from malaria in this state.

* * * *

POLIOMYELITIS

During the first three weeks of July, the incidence of poliomyelitis was on the increase in Mississippi and present indications are that it will rise still further, according to Dr. A. L. Gray, director of Preventable Disease Control. During the week ending July 18, there were 14 cases reported; during the previous week, 2 cases; and during the week ending July 4, 6 cases. The total number of cases since the first of the year is 49, as of July 22. These cases were fairly well distributed over the state; however, there have been more cases in central Mississippi than in any other section.

During July there has been a marked increase in the incidence of polio in several of the Southern states, particularly in Florida, Alabama, Georgia, and in Mississippi. Alabama and Florida have had the greatest increase during the few days preceding this report. To date, or as of July 22, Alabama has reported 103 cases since January 1 with more than half of these having occurred since July 9. Florida has had three primary foci of infection since January 1, namely, Miami, Pensacola, and Jacksonville. Cases are still being reported from these three areas. Their last weekly report showed a total of 88 cases since January 1. During the two weeks, July 8-22, Georgia has had a considerable increase. In view of the fact that the disease has increased considerably in Alabama, Georgia, and Florida and that it usually travels westward, it is safe to predict that there will be further increases in Mississippi.

It is felt that the thing of most importance in preventing spread of the disease is to prevent as many contacts with people as possible. This, of course, involves primarily young children in whom the incidence of the disease is highest.

In spite of continuous research by able scientists over many years, there still does not exist adequate knowledge to assure prevention or cure of this strange malady. However, the outlook is not hopeless. Heretofore, most of the work accomplished through research was on an individual basis; today the National Foundation for Infantile Paralysis is succeeding in unifying this work and is making possible the funds for an unprecedented amount of research and general intensification of efforts in all directions.

Because of the variability of the disease, initial symptoms may be so mild as to escape notice. In the first stage, known as the "systemic" stage, there is usually some fever, sore throat, general malaise and gastro-intestinal symptoms. If the disease is not abortive it progresses to the second stage or non-paralytic stage in the course of two or three days. Fever continues accompanied by headache and the patient is usually irritable. He complains of pain in the neck and back as the meninges become involved. There is likely to be some limitation of motion due to muscle tenderness and even the weight of the bed clothing may be disturbing. Examination of the spinal fluid during this stage will disclose whether the patient has poliomyelitis. This second stage of the disease may last only a few hours before the onset of paralysis. There follows marked weakness as the paralysis appears; reflexes are diminished and fever subsides as various muscles become affected. The paralysis is flaccid or limp rather than spastic or rigid and its distribution is variable. Treatment in the acute stage is largely symptomatic. Absolute rest is essential. Splints may be utilized to relieve pain in the affected limbs and to insure immobilization. Convalescence is usually uneventful and may be prolonged, depending upon the degree and severity of the paralysis. When poliomyelitis is suspected the patient should be isolated to prevent possible spread of the disease to others and to permit maximum rest when it is most needed. Not only the patient's life is involved, but also the danger of permanent disability and deformity if he survives.

Physicians are urged to be on watch for this disease and as soon as it is suspected to report immediately to the county health officer.

BACILLARY DYSENTERY

The occurrence of severe bacillary dysentery in several sections of the state sounds a warning for physicians to take every precaution to see that patients with this disease are carefully isolated and properly directed as to care and treatment. There have been recent instances of the disease attacking one member of the family right after another until all members have had the disease, resulting frequently in deaths. Fatalities among children are greater than among adults. The disease spreads very rapidly not only within the family group but within community groups, especially if the standards of environmental sanitation and personal hygiene are low. This means that when cases develop the family physician should emphasize to those responsible for the care of the patient the absolute necessity for safe disposal of excreta as well as general measures of hygiene. Factors helpful in preventing the disease are cleanliness, adequate refrigeration of food to prevent contamination, protection from flies, and avoidance of individuals with any degree of diarrhea.

For the sake of an accurate diagnosis in bacillary dysentery, it may be helpful to point out again that a properly collected specimen of feces is one collected in 30 per cent glycerin in 0.85 per cent of sodium chloride (bottles provided by the State Hygienic Laboratory), with a very small amount of feces (about the size of 2 field peas), to be delivered to the laboratory not later than 48 hours after the bottle has been inoculated[1]. From this specimen the laboratory will be able to give a report on the presence of typhoid, paratyphoid, bacillary dysentery, or any pathogenic enteric organisms.

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1. Mayfield, C. R. and Gober, M.: Bacillary Dysentery in Mississippi, Mississippi Doctor, 17:703, May, 1940.

County Societies

AMITE—WILKINSON COUNTIES MEDICAL SOCIETY

That doctors and other professional men who devote their entire time to the healing and comfort of others, can take an hour off and relax now and then was capably demonstrated on the evening of Thursday, July 10, when the Amite-Wilkinson Counties Medical Society held its regular monthly meeting at Field Memorial Hospital, at Centerville.

Following a delicious dinner prepared under the supervision of Miss Mary Neyland at the hospital, the Ladies' Auxiliary took over the program and presented a pantomine filled with wit, humor and some pathos.

Those presenting the program: Mrs. W. T. Thornhill and Mrs. David Henry Thornhill, of Crosby; Mrs. R. J. Field and Mrs. S. E. Field, of Centreville; Mrs. Harrison Butler and Mrs. Paul Jackson, of Liberty; Mrs. Charlie Catchings, of Woodville, and Mrs. W. R. Brumfield, of Gloster.

A guest, and an exceptional entertainer, was Miss Jennie Ford Crawford, of Centreville, who gave several most enjoyable and witty sketches in the Negro dialect.

The usual business meeting of the society followed.

—W. T. Thornhill, Reporter.

DESOTO COUNTY

The author of these lines, which we found on the back of an old postal card dated 1908, is unknown to us. We sent a copy to our sweetheart underlining the tenderer verses and today, after thirty and more years, we would underscore those passages more forcibly than before.

THE FIRST WOMAN

Twashtri, the Vulcan of Hindo mythology, created the world; but when he wished to create a woman, he found that he had employed all his material in the creation of Man. There did not remain one solid element. Then Twashtri, perplexed, fell into a profound meditation.

He aroused himself as follows:

He took the roundness of the moon,
The hot and quivering air of noon;
The chill of Boreas' icy breath,
Divine devotion unto death;
Inconstancy of wayward wind,
Timidity of gentle hind;
The lion's courage when at bay,
Immortal hope of dawning day;
Forebodings of the dreary night,
The poise of eagle in its flight;
Sweet flavor of the honey bee,
The fury of the surging sea;
The mellow moonbeams' calm repose,
The clinging of the climbing rose;
Relentlessness of open grave,

The gracefulness of curling wave;
The lovelight from the eyes of fawn,
The teardrop from the mist of dawn;
The gladsome joy of bright sun ray,
The vanity of peacock, gay;
The velvet flush of roseleaf tints,
The passion of the tiger's might,
The purity of lily, white;
The chatter of the noisy jay,
The dove's love notes at close of day.

* * * *

Rich rainbow rays flashed from the rest,
Composite of creation's best
He crowned her with a faith divine;
Showed her to Man, and said—"She's thine."

* * * *

No one thing is small of importance in the practice of medicine. Every doctor in the South especially should feel that he is fulfilling a Divine mission in building health reserves within his clientele. The South in a large measure is the arsenal of democratic manpower for the world. This brings a great challenge as well as a glorious opportunity to the country practitioner especially. No cog in the machinery set up to save world democracy is of more importance than the country doctor in Mississippi. The victories of the medical profession have been great, but the challenge to it now is bigger and broader and of more importance than it has ever been. Let us stand on the history of the past and catch the vision of the broader opportunities of the future. Let us adjust our hearts to the invisible broadcasting station beyond the clouds in order that we may be endowed with power and strength within to carry on the democratic way. Let us keep in mind the Golden Rule as our standard of ethics, never forgetting that service is the measure of greatness, and hold fast to the faith that the Man who spoke these truths created the laws of medical science and that He has the power to save the democratic plan of government that He brought to earth.

The above is an extract from The Challenge to Medicine, the presidential address before The Mississippi State Medical Association in Biloxi, May, 1941, by Dr. W. H. Anderson. It will benefit you to read and reread this classical paper.

* * * *

The Australian kangaroo is a marsupial; so is the American opossum. Both carry their infant children in a bag of skin to which the nursing nipples conveniently project. The opossum, commonly called the plain 'possum, is defined as a small animal which, when caught or threatened with danger, pretends to be dead, hence the expression, 'playing 'possum.'

The well known Captain John Smith, an early American explorer, described the possum as "hath a head like a Swine, a tail like a Rat, and is the bigness of a Cat; under the belly she hath a bagge."

'Possum and 'taters have long been considered a relish by the folks of the darker hue in the South and we have seen others who spoke of the above dish with delight and delectation, but as for us, we have no hankering and pining for this form of provision regardless of its fame and vitamin contents.

* * * *

The English Bible, a book which, if everything else in our language should perish, would alone suffice to show the whole extent of its beauty and power." — Thomas Babington Macaulay.

"It is interesting to me that the negro baby rarely if ever suffers with the so-called allergic conditions of the gastrointestinal tract. Vomiting practically never occurs except from overloading. The colicky negro babies that I have seen, I believe, I could count on the fingers of one hand. Pyloric stenosis is almost unknown. When any of these conditions is encountered in this race the child is almost invariably a mulatto. It is equally true that asthma, eczema and hayfever are relatively infrequent among negro children. What all this means I do not know, but one may theorize that the philosophy of the negro, his mode of life and way of thinking very probably profoundly influence the action of his sympathetic nervous system.

Possibly when we learn to live differently and think differently we may hope for the gradual disappearance of these maladies."—Dr. M. Hines Roberts, Atlanta, Ga. June, 1941, issue. Southern Medical Journal.

* * * *

Anent the foregoing article on THE FIRST WOMAN. We did not wish to mar its beautiful passages or bring into relief the rather inharmonious after-thought.

It is related that when Man had the beautiful creature presented to him he was supremely happy and the pair left the presence of the gods ecstatically contented. . . . In the course of time, he brings her back, stating, "This creature is always ill, complaining, pestering and talking all the while."

The gods received her. . . . After not so long a time, Man came back and earnestly desired Woman again. They left side by side and happy again. . . . After not so long a time, he brings this lovely creature back to the gods, stating for reasons already given he cannot live with her, and further lamenting, "Woe is me. I cannot live with her and I cannot live without her."

Rt. 4, Memphis, Tenn. L. L. Minor,
July 20, 1941. Editor.

LAUDERDALE COUNTY MEDICAL SOCIETY

The monthly meeting of the Lauderdale County Medical Society was held at Hoye's Sanitarium July 17.

The president, T. G. Cleveland, M.D., presided. The program was as follows:

Management of Mental Cases in Private Practice—E. S. Sledge, M.D., Mobile, Ala.

Ways of Commitment and Management of Mental Patients in the Mississippi State Hospitals — John S. Hickman, M.D., Meridian, Miss.

Dinner—6:30-7:30 P. M. Guests of Hoye's Sanitarium.

Recent Views on the Value of Shock Treatment in Mental Diseases, A Review of Its Advantages and Limitations—Lewis A. Golden, M.D., New Orleans, La.

The Development of Personality — Dr. C. Estornelle, Vicksburg, Miss.

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HYGEIA FOR HEALTH DEFENSE

MRS. G. R. DILLINGER, *Nat'l Chairman of Hygeia*

The word most frequently on the lips of every American today is "defense". Defense means not only the building of war materials but the maintenance of the health and the morale of the people. Many new problems confront us with respect to the latter, chief among which is the problem of adequate nutrition.

At the recent annual meeting of the Woman's Auxiliary in Cleveland, Ohio, the question of nutrition for defense was the subject of much discussion. Two interesting addresses were given on this subject before the general body. At the Tuesday luncheon, Dr. Morris Fishbein, Editor of *The Journal of the American Medical Association* and of *Hygeia,* in his remarks with respect to the Auxiliary program for 1941-1942, commended the proposed plan for study of the problems of adequate nutrition for defense.

The Council on Foods and Nutrition of the American Medical Association has worked several years on the various aspects of the problem of nutrition, especially in relation to the nutritive qualities of foods in general use and of the effects on these qualities of the various methods of processing, distribution and preparation of foods. Interesting articles on these questions have appeared in *Hygeia* during recent years.

Hygeia presents scientific information in understandable form for lay readers. In every issue there will be articles presenting valuable information on nutrition as well as on other health problems. *Hygeia* will present also an article listing the findings of the draft board concerning the health defects responsible for the unfitness of young men for military service.

Two major defects of health were found to be defective eyes and teeth. *Hygeia* has published articles giving authentic information on the care of the eyes and the teeth. Wider dissemination of such knowledge would do much toward preventing such conditions with respect to national health. *Hygeia* can help awaken public interest in this regard.

Hygeia has always been in the forefront of national defense. It has been concerned with the health of the individual from the prenatal period to the end of life. Its main objective has been health education for the purpose of building a more healthful and therefore a stronger and more efficient nation.

Lay women's organizations are focusing their attention on problems of health for defense. It is our responsibility as wives of doctors to refer them to *Hygeia* where they can get the authentic information from experts. Moreover, the leaders in many of these organizations are looking to the Woman's Auxiliary for help in this regard.

What a challenge this is to us! Let us meet that challenge and say to our sister Americans everywhere, "Let us help you with *Hygeia* for Health Defense." (Clipped from the *Bulletin*).

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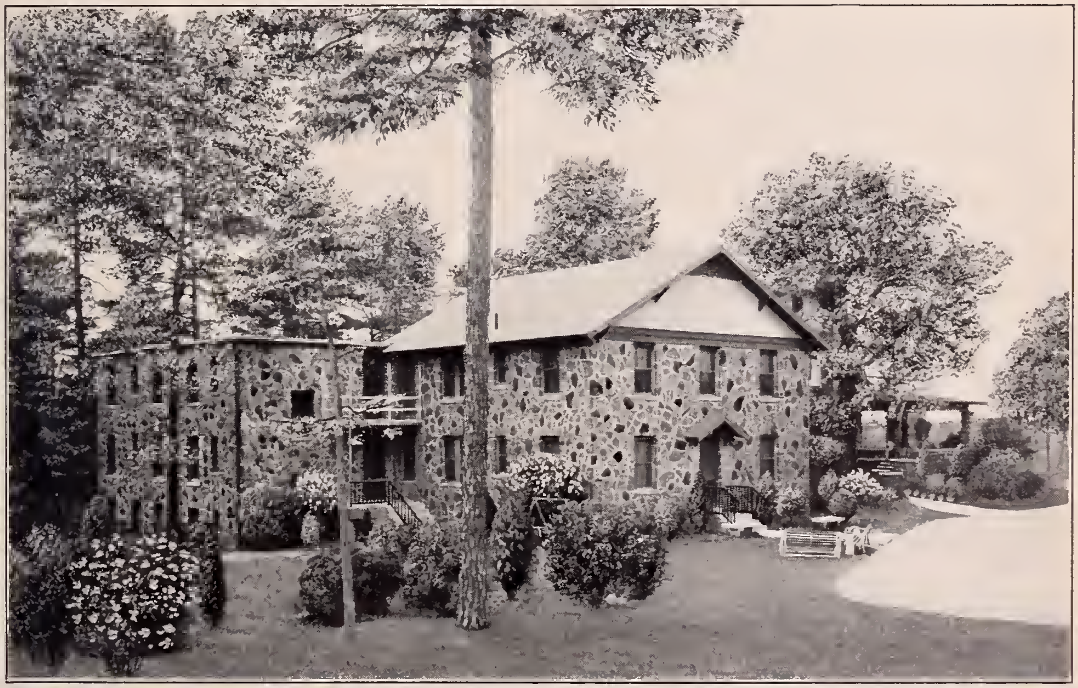

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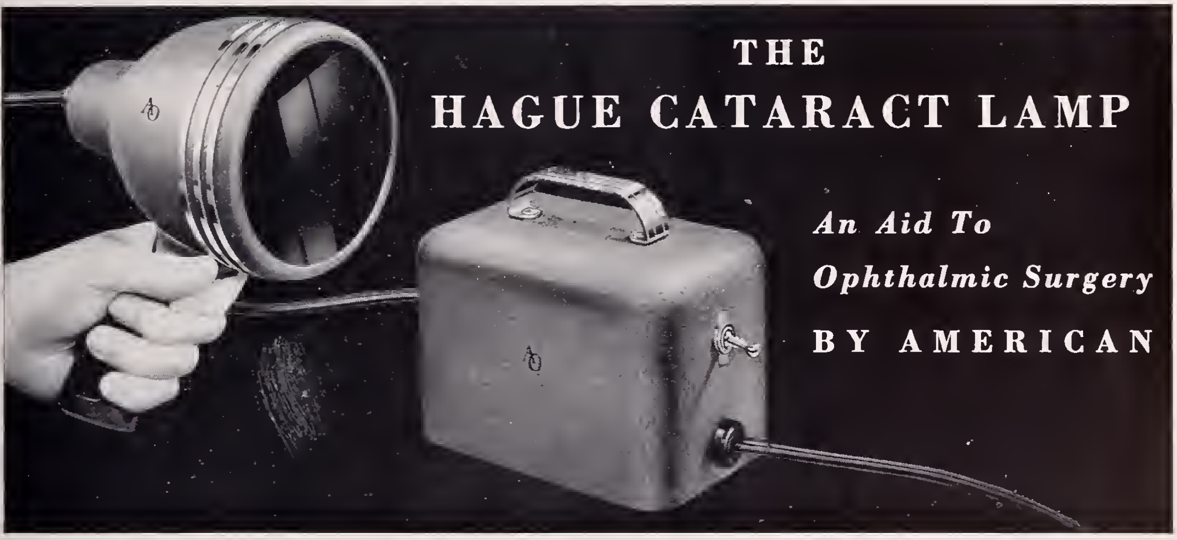
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VOL. 19 BOONEVILLE, MISSISSIPPI, SEPTEMBER, 1941 NO. 4

THE N.Y. ACADEMY
OF MEDICINE
SEP 1941

The man who seeks one thing in life and but one
May hope to achieve it before life is done;
But he who seeks all things, wherever he goes
Only reaps from the hopes which around him he sows
A harvest of barren regrets.

—LYTTON

BRIEF HISTORICAL NOTES
ON
MEAD'S CEREAL AND PABLUM

HAND in hand with pediatric progress, the introduction of Mead's Cereal in 1930 marked a new concept in the function of cereals in the child's dietary. For 150 years before that, since the days of "pap" and "panada," there had been no noteworthy improvement in the nutritive quality of cereals for infant feeding. Cereals were fed principally for their carbohydrate content.

The formula of Mead's Cereal was designed to supplement the baby's diet in minerals and vitamins, especially iron and B_1. How well it has succeeded in these functions may be seen from two examples:

(1) As little as one-sixth ounce of Mead's Cereal supplies over half of the iron and more than one-fifth of the vitamin B_1 minimum requirements of the 3-months-old bottle-fed baby. (2) One-half ounce of Mead's Cereal furnishes all of the iron and two-thirds of the vitamin B_1 minimum requirements of the 6-months-old breast-fed baby.

That the medical profession has recognized the importance of this contribution is indicated by the fact that cereal is now included in the baby's diet as early as the third or fourth month instead of at the sixth to twelfth month as was the custom only a decade or two ago.

In 1933 Mead Johnson & Company went a step further, improving the Mead's Cereal mixture by a special process of cooking, which rendered it easily tolerated by the infant and at the same time did away with the need for prolonged cereal cooking in the home. The result is Pablum, an original product which offers all of the nutritional qualities of Mead's Cereal, plus the convenience of thorough scientific cooking.

During the last ten years, these products have been used in a great deal of clinical investigation on various aspects of nutrition, which have been reported in the scientific literature.

Many physicians recognize the pioneer efforts on the part of Mead Johnson & Company by specifying Mead's Cereal and PABLUM.

Pablum is a palatable mixed cereal food, vitamin and mineral enriched, composed of wheatmeal (farina), oatmeal, cornmeal, wheat embryo, beef bone, brewers' yeast, alfalfa leaf, sodium chloride, and reduced iron.

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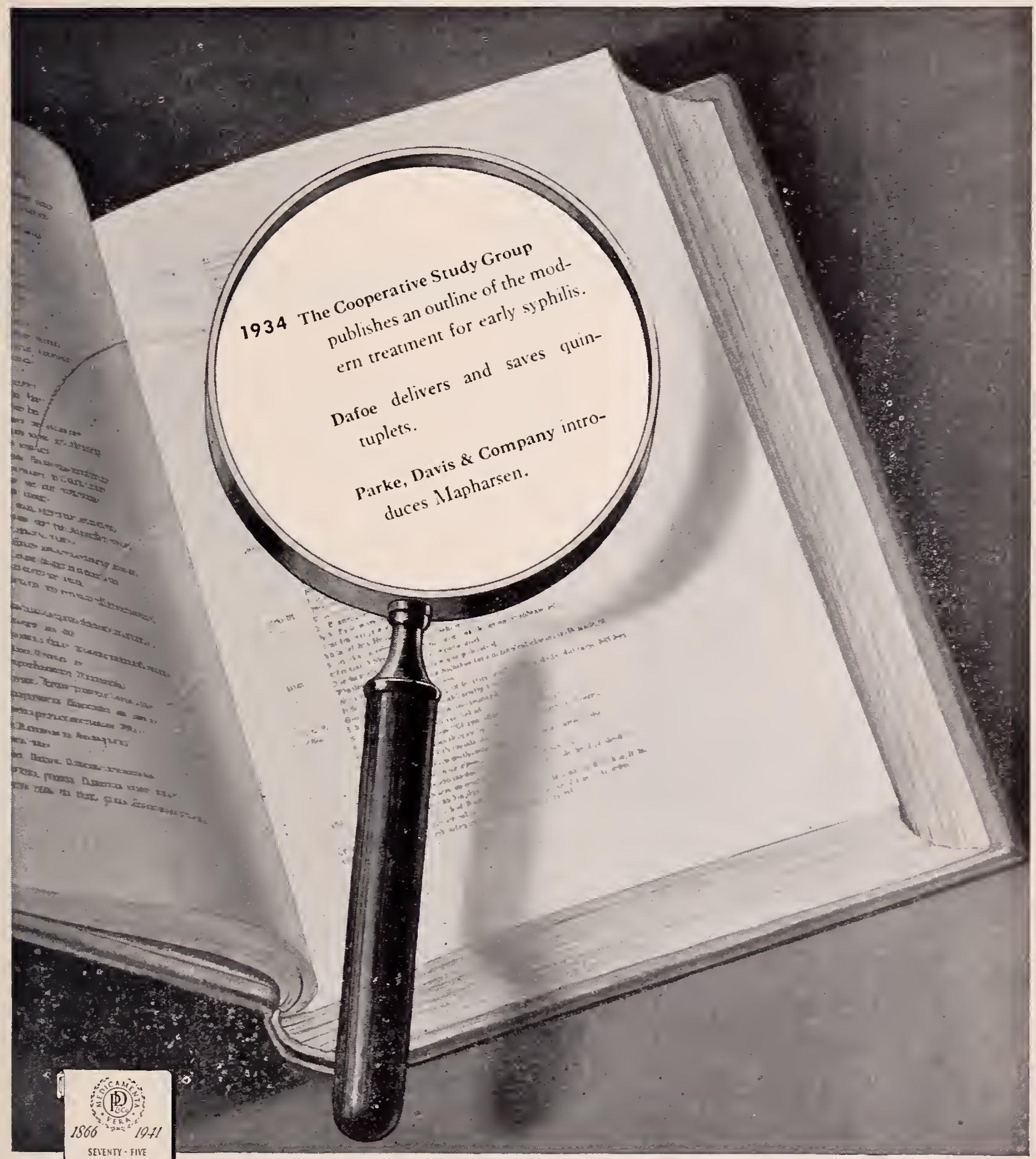

1934 The Cooperative Study Group publishes an outline of the modern treatment for early syphilis.

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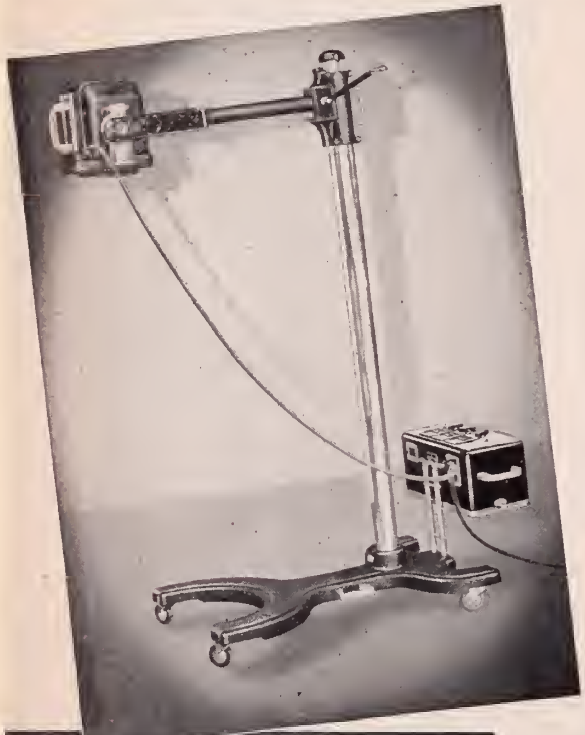

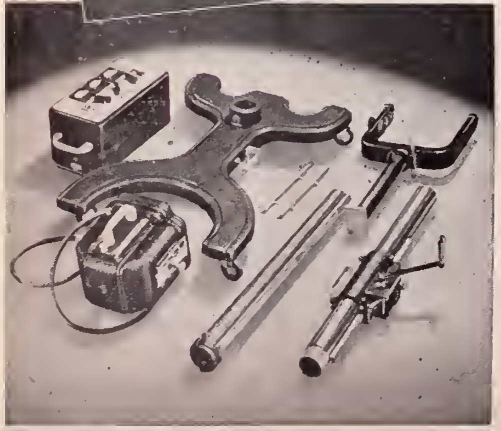

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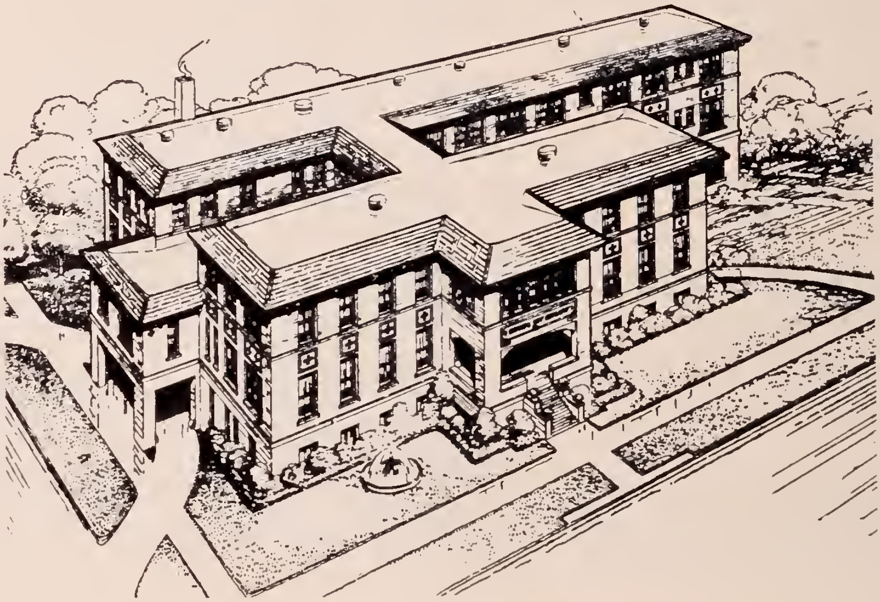

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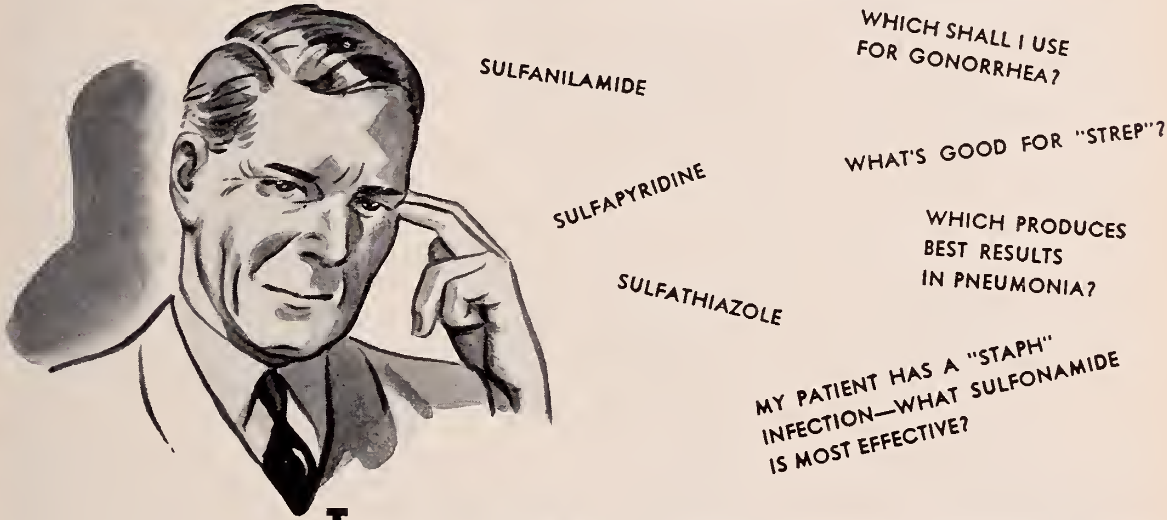
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SOLUBILITY in 100 cc. of water at 37.5° C.	1480 mg.	54 mg.	96 mg.
PHARMACOLOGY Absorption	Relatively uniform and rapid.	Irregular and often poor.	Uniform—very rapid.
Distribution	In all body fluids.	In all body fluids.	In blood but poorly in other body fluids.
Excretion	Rapid.	Slower than Sulfanilamide.	Rapid.
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HOW SUPPLIED BY SQUIBB Tablets	5 grain in bot. of 100, 500, 1000. 7½ grain in bot. of 25, 100, 1000.	0.5 gram in bot. of 50, 100, 1000.	0.5 gram in bot. of 50, 100, 500, 1000.
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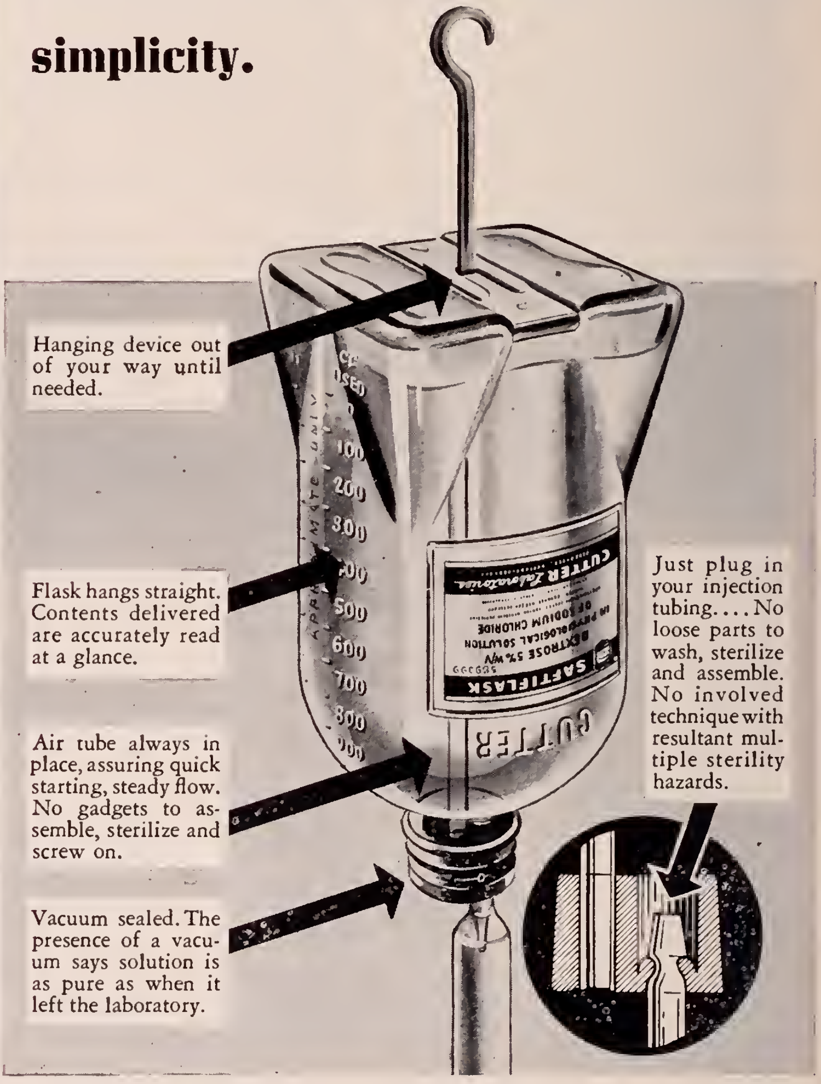
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The Obligation of a Medical School to the Community*

MAXWELL E. LAPHAM, M. D.
New Orleans, La.

To most people a medical school is an institution where physicians are graduated. It is with this narrow idea in mind that I shall attempt to give you some idea of what I think a modern school should stand for in a community.

Obviously the most important function of a medical school is to expose embryo physicians to the best training available so that they will be able eventually to practice an acceptable type of medicine, and thereby fulfill their obligations to a public which should expect the best in medical care from them. Therefore, a medical school's first consideration is the public welfare, and the reputation of a school depends very largely on the reaction of a public to its accomplishments, in terms of the calibre of men graduated as well as in other works which it may produce.

Standards for selecting medical students have changed markedly in the past few years. Last fall an elderly physician came into my office with his grandson. He said, "Well Doctor, I have brought this boy in to register in the Freshman class." I asked him if he had applied previously for admission, and he replied with some surprise, "No. I did not know that was necessary." He continued, "When I went to medical school, back in 1899, I simply presented myself with my tuition money on the first day of school, and I was accepted with no questions asked."

Since that time it has become necessary to evaluate applicants much more carefully. In the first place, most medical schools have several hundred applicants each year, with only a few places relatively to be filled in the Freshman class. It is important, to select those who seem to be best qualified, not only from the standpoint of scholastic attainment, but aptitude, background, personal characteristics, and relationship with other people. One frequently hears that some of the best physicians in the country were mediocre medical students from a scholastic standpoint, but it is felt that certain minimum requirements should be attained before a student is admitted. These are not so high that the man of average intelligence cannot qualify. However, experience has shown that extremely poor students scholastically are unable to do even fair work in medical school, even though they may feel that they want to be physicians more than anything else in the world. The students must have something more than a burning desire to study medicine, for this desire is often not his own but has been gradually built up by his family's wish that there be a professional man in the family.

It is, then, a serious obligation a school must fulfill to the public in carefully selecting the men who are to be the physicians of the future in communities they will serve.

In the South particularly there are not many medical schools, and it therefore seems feasible that Southern schools should, first of all, select their students as much as possible on a geographic basis, taking to a large extent those qualified men from the territory who live within the sphere of influence of the school. There are some schools, particularly the Eastern ones, which ignore this idea almost entirely, and their calsses are selected from applicants all over the United States. We feel that at least 80% of our students should be residents of the South, and a large proportion of these should be from the immediate area of surrounding states.

At times pressure is brought to bear upon medical schools to accept students whose qualifications do not seem to "stack up" with standards established. We must consider such cases dispassionately, since lowering of standards will inevitably be reflected in failures to graduate or, if the student does manage to "get by", the type of medical service rendered may be subject to public criticism.

The success and prestige of a medical school depends largely upon the type of faculty which it has been able to develop. Faculties should be a carefully selected group, for only by being very discriminative in this selection can the best teaching program be carried on. Whereas years ago a relatively small group of outstanding men formed the faculty of a medical school, at the present time a medical school faculty consists of large numbers of men, often 150 to 250, some of whom spend all of their time in teaching capacities and others who give only a part of their time. From the standpoint of best teaching, a combination in a faculty of part time and full time instructors seems to give the best type of teaching program, since both intensive, theoretical teaching, and practical approach are coördinated. Buildings are important to a school, but an outstanding faculty can overcome the deficiencies in physical structure of a medical school.

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*Read before the Section on Medicine at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 14, 1941.

If a faculty does its entire job, it should not only give a good course of instruction to medical students, but it should make its influence felt by participating in medical affairs which affect and benefit the whole medical profession, as well as the public.

It should consist of men who, by virtue of their qualifications, can assume unquestioned leadership in medical affairs, both locally and nationally. They should be able to advise and coöperate with state and national governmental agencies, giving these groups the value of their experience as thorough medical men and as individuals interested in improving medical care in general, which should always be the aim of all conscientious physicians.

Standards of practice should be such in a medical school that smaller groups or individuals could accept them, knowing that these practices have been carefully worked out scientifically and practically. One frequently hears it said of one medical school or another that it is the kind of school which turns out good practical doctors. Every student should have acquired sufficient knowledge to qualify for that status. Every medical school worth bearing the name should not only do this, but more. A medical school should continue to make itself known by particular works which make it a fountainhead of special knowledge. Unless a school produces original work it will not progress. It should be an authority upon scientific work; it should be interested at all times in contributing to improvements in medical care and medical knowledge. It should stand for a general fine level of serviec, as well as being outstanding in certain branches, depending upon the interests and capabilities of certain faculty members. Theoretically, every school should excel in all branches, but geniuses are rare, and many men make more rapid strides than others. I would like to think that Tulane, for instance, were making its mark in Medicine, Tropical Medicine, Surgery, and other branches, to the extent that one should be able to look to that school for leadership in those branches.

I would also like to think that at all times physicians, whether alumni or not, would look to a local medical school for assistance and guidance, and that the faculty were always approachable and not a group set apart and apparently disinterested in personal or group problems of physicians or public organizations. There should be no question in the minds of anyone but that they could obtain what they need in advice and guidance from a medical school. It is an institution to give freely of the service it is equipped to give and welcomes every opportunity to be of service.

Frequently men who have graduated from a school feel upon graduation that they have severed their connection with the school and that the school ceases its interest in them. This should not be the case, and they should always feel that they can go back for whatever professional assistance they need. On the other hand, a medical school whose attitude is to turn out graduates and wash its hands of them has the wrong attitude. It should continue to give service by offering postgraduate and graduate work, and should interest not only its alumni but the other men in its immediate geographic area to continue their medical education.

This has been done by many schools to a large extent with considerable satisfaction on the part of the school, as well as with some appreciation, it is hoped, on the part of the physicians taking advantage of this work.

In some instances physicians have taken long postgraduate courses preparing them for special work, while others have taken short courses which have been offered as review courses.

A further obligation which it is felt a medical school has to fulfill to physicians is the presentation of courses easily obtainable by physicians. Extension courses have been offered whereby physicians can receive some instruction and take advantage of consultation service in their own localities. This type of postgraduate work serves a definite need, although it is of necessity an incomplete course. Benefit should be obtained by this method of teaching, however, in pointing out changes in practice, by exchange of ideas, and by the school faculties to know the needs of private physicians.

This latter realization should be reflected in improved methods of practical training in the undergraduate courses, so that a student might conceivably be better prepared to meet the conditions which exist in private practice if extension course instructors are able to appreciate the needs of the private practitioner.

Numbers of schools are assisting much in helping physicians to maintain an interest in advances in medicine by publishing bulletins containing practical and scientific material to those physicians who care to receive such information.

We are now preparing such a bulletin which will contain sound medical information which is immediately usable. In this manner we hope to fulfill further our obligations to nearby physicians.

Frequently the public is unsympathetic with the efforts of groups of physicians or individuals, and is sometimes particularly critical of a medical school group. Faculties should always be interested in explaining the efforts of the profession, and much can be done in advancing the profession, and much can be done in advancing the position of medical problems by enlightening the public on such matters as the control of cancer, tuberculosis, venereal diseases, and of maternal and infant deaths, among many other problems. Medical schools should place themselves in the position of working with the profession at large, with national and state organizations to the ultimate good of the public which all professional agencies serve.

Currently all medical schools have a great responsibility in preparing physicians, not only for the civil practice, but for the military services which it is estimated will need about 3,500 new graduates each year for the next several years. At no time since the last war have there been such demands made.

Schools are asking the coöperation of the Selective Service Boards to defer medical students in good standing so that the number of physicians requested by the government may be supplied. It has become a great problem to try to supply this number of recent medical graduates for military service, when paradoxically, there was no assurance until recently that the Selective Service Boards would defer them.

Since there are only 5,000 graduates a year from all medical schools in the United States, it means that there will be about 1,500 physicians each year to go into civil practice. There are probably 2,000 or more deaths and old age retirements among physicians each year, so there is bound to be a shortage of physicians even if every medical student is allowed to remain in school by deferment.

Much can be done in the way of allocating medical services so that all localities can be served, but as yet there has been no particular effort made to evaluate the medical needs of communities. Until this is done, there will inevitably be definite lack of medical care in many sections of the country. I believe there should be some long term planning to determine at least the minimum number of physicians needed to take care of the civil population and see that such care is provided. This should at the same time allow sufficient physicians to enter the military service, particularly if one includes the 3,500 recent graduates who will go into service as soon as they have completed their internships.

Every physician will inevitably be called upon to do more than he is presently doing, if the national situation becomes more serious. I believe the coöperation of all medical groups and institutions will be required to plan for allocating medical care and such planning will do much to prevent duplication of medical care in some places, and great privation and suffering in others.

Medical schools, I repeat, have a much broader program than just training young men to become physicians. They should continue to offer medical teaching to graduate physicians, and research programs should be sponsored and encouraged. They should coöperate with organized medicine in improving the status of medical-public relationships; they should help to inform the public of the efforts physicians are making to improve the general health of the public, and coöperation and assistance should be given state, municipal and federal agencies to advance programs, both in time of peace and war. I believe honest efforts are being made by most medical schools to fulfill these obligations.

Anorectal Disease and Its Treatment*

THOMAS WOLFORD, M.D., F.A.C.S.
COLUMBUS, MISS.

WE ARE practicing medicine, as well as living, in a period of changing times where time-worn ideas and methods, though commonly accepted heretofore as being adequate to meet a given situation, when subjected to a critical analysis of their practical adaption and their method of application or ultimate results, must be discarded. So it is with proctological conditions. Admittedly an unsavory field for frank discussion on the patient's part or desire of the doctor to question and to examine the anorectal canal of his every patient, there is good reason why results have not stood the test of time and why our patients hesitate to discuss rectal conditions, which in some instances are of more significance than the symptoms for which the patient presents himself. First, the average patient is hesitant to discuss anorectal conditions for possibly two reasons: (1) modesty, which should not apply to the average intelligent patient; and (2) a common knowledge on the patient's part that the majority of so-called rectal operations are extremely painful and in a great majority of instances not successful. Frequently, the patient subjects himself to surgery of the anorectal region to find he is even considerably worse off than before operation, having spent painful time and money without gaining satisfactory results. Recently we saw a case, operated for hemorrhoids and a fistula less than six months previously, who had a large perirectal abscess, a stricture of the rectal canal and presenting through the narrowed anal canal a mass of thrombosed hemorrhoids. So-called fistula operations are even less successful. Why then, with additional knowledge of surgical procedures do we have these frequent failures? I feel sure that it is due to the lack of application of sound surgical procedures to the anorectal region that we routinely apply to the abdomen. The first cardinal principle of surgery is adequate exposure; secondly, the use of a minimum amount of suturing in an infected field, thirdly, adequate postoperative care. To deal intelligently with any given surgical condition we must have an adequate knowledge of the pathological process to be dealt with and the proper concept of the anatomical structures and their physiological function. A detailed history and physical examination must first be carried out before one is able to determine exactly the surgical measures to be used. History without physical examination will frequently be misleading. Carcinoma of the lower bowel will frequently simulate ameobic dysentery in its early stages, whereas a simple examination of the anorectal canal may reveal an early amendable carcinoma. Repeated stool examinations will frequently not reveal amebae, whereas a proctoscope will often demonstrate the typical ulcers yielding the organism for diagnosis.

Briefly, let us review the developmental anatomy of this region. Familiar to all is the fact that the hind gut and the anus are separated in early life, the intervening septum being resolved at about the seventh week of pre-natal life. Therefore the anus is derived from the ectoderm whereas the rectum originates from the entoderm, giving a definite line of demarcation, the so-called pectinate line. Structures above this line are relatively painless, those below painful. The papilli or pillars of Morgagni and their related crypts probably are ectodermal in origin, originating along the pectinate line, first as bud-like structures, later developing a dimpling or crypts lateral to the papilli. These structures play an important part in the later consideration of pathological conditions of this region. The two sphincters, the external and internal, are situated external and internal to the pectinate line and serve to keep the anorectal canal closed. The external sphincter differs from the internal sphincter in that its fibers do not completely encircle the anus, their posterior branches crossing into nearby structures. This crossing is also present to a lesser extent anteriorly. In this way the canal is closed in a "slit" rather than into a circle. In contradistinction the fibers of the internal sphincter completely encircle the bowel.

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*Read before the Section on Surgery at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 15, 1941.

To deal adequately with surgery of this region it is necessary to understand fully the blood supply to this area. Especially is this true in regard to intelligent dealing with hemorrhoids. The main arterial supply is from the inferior mesenteric artery, terminating as the superior hemorrhoidal and from the inferior and middle hemorrhoidal, the latter two originating from the internal iliac artery. The venous drainage from the anus and rectum is mainly through the superior, middle and inferior hemorrhoidal veins. These veins with their intercommunicating branches occupy a constant anatomical position and can be demonstrated beautifully under adequate exposure. These venous masses, two on the right and one on the left, with a frequent additional branch of the right posterior must be identified, isolated and ligated high if their recurrence is undesirable.

Psychology often is overlooked in dealing with our patients, and especially is this true of anorectal disease. An intelligent patient soon learns to interpret a doctor's reaction to a given condition in their mutual discussion of the underlying ailment. Almost every daily newspaper and a great majority of magazines carry attractively worked advertisements for "pile cures," salves and cures "without" the knife, very convincing in their salesmanship, the instigators of these "cures" being better psychologists than the majority of us doctors. One "rectal clinic" sends out a beautifully colored and illustrated booklet describing its attractive surroundings, incidentally dropping numerous hints and testimonials of its success. Advertising is not necessary if we can offer these patients results with a minimum of pain. It is possible to do a complete examination of the anorectal canal despite a painful condition with a minimum of discomfort, if we first explain to the patient that the examination will be carried out gently. With coöperation even a proctoscopic examination can be done without pain. A proctoscope should not be considered a gear shift lever nor the examining finger the buzzing point of a drill. By the use of one of the several ointments it is possible to have the anorectal canal less painful following the examination than before.

As the underlying basis of the majority of anorectal disorders may primarily be attributed to poor venous drainage, let us hypothetically take Mrs. Jones, whom we have adequately demonstrated by a thorough examination to be afflicted with pruritis ani, a small fissure, a rectal ulcer, third degree hemorrhoids and a fistula. Mrs. Jones' conception of her condition is some vague idea that she has "itching piles" and in her own mind probably questions our ability, as she used everything from turpentine to "pazo." How easy it would be to explain to Mrs. Jones that her condition was similar to her mother's varicose veins. It was a rapid convalescene when grandmother's varicosities were ligated. However, more importance was placed on the type of medicine used as a dressing on the ulcer than the causative factor. Yet in Mrs. Jones' we have an analagous condition.

With adequate venous drainage the lining of the anorectal canal and its skin margins are competent, in the majority of cases to deal with infectious processes. Granted our patient consents to operation, we then follow her through the different states of rehabilitation. All further rectal pathology having been ruled out, a thorough physical and laboratory check-up shows us that operation is indicated. She is instructed to maintain a residue free diet for 24-48 hours, taking an adequate amount of mineral oil. On the night prior to operation she is admitted to the hospital, given a plain water enema and enough sedatives to insure an uninterrupted night's sleep. At 6 A.M. she is given another plain water enema and enough barbiturates are given to abolish any fear of the operating room. One per cent solution of neosynephrine is used preliminary to the low spinal. In the majority of cases we feel this solution more adequately maintains the blood pressure without the nervous irritability of adrenalin or ephedrin. However, the bradycardia must be watched, especially in elderly patients. The patient is placed on the operating table in the usual spinal position and a puncture made as low as possible. One per cent pontocain solution mixed with glucose is used, the amount varying with the estimated duration of the operative procedure. As soon as the solution has been injected, always very slowly, the patient is turned over on her abdomen and the head of the table elevated 15 degrees for 5 minutes. The solution quickly falls to the region of the cauda equina and in a large percentage of cases produces a perianal anesthesia with an analgesia of the buttocks and lower extremities. Some patients are able to move the entire leg. After the elapsed time, the table is leveled and one or two pillows placed under the patient's hips and lower abdomen. In this manner the anorectal canal assumes an easily accessible position not only for operation but for proctoscopic examination. in no case should the perianal skin be shaved. The field having been prepared and draped, the anorectal canal is again inspected to familiarize the operator with the pathology present and to investigate the possibility of additional abnormal conditions. From the outside we encounter the pruritis ani. Excluding neurosis and mycotic infections the causative factor is anorectal pathology—generally a misconception of anal cleanliness plus secretions or moisture from an unhealthy rectum. Neurotics we never expect to cure, especially if they have had a lengthy pruritis ani. With a hypersensitive nervous system the rectum succumbs to a blitzkreig of invading fingernails and until this hypersensitiveness is removed their itching will persist despite adequate treatment. Vaginal secretions, particularly Trichomonas vaginalis, must not be overlooked, as well as food allergies, asthmatics and hypersensitive skins. It is perfectly possible to have an "eczema" of the anus as of any other portion of the skin. It is advisable not to forget foci of infection in teeth and tonsils as well as gastro-intestinal disorders. Pruritis ani has been definitely proved not to be infectious in origin, as the skin and mucous membrane of this area is similar in all details to skin and mucous membrane in other parts of the body, though constantly subjected to colon bacilli, staphylocci and other organisms. Numerous theories have been advanced as to its origin, yet the majority of these have been disproved. I have yet to see a definite pruritis ani without underlying rectal pathology being present at its first manifestation. Extensive involvements are generally given several superficial x-ray treatments, cautiously, preliminary to surgery. All patients with pruritis ani must be instructed to keep the anal region clean, absolutely hands off and assured with their help their condition will be relieved. The surgical aspect of pruritis ani will be discussed later.

The fistula presents an oozing external opening almost always well away from the anal margin. In attempting to deal adequately with a fistula let us consider its mechanism. It has its inception inside the rectum as an infected crypt. This infection breaks through the bowel wall and encounters little resistance, generally painless at this stage, until it meets the subcutaneous tissue. Here it begins to encounter stronger tissue, so forms an abscess pocket. Each bowel movement forces more fecal current into the internal opening. Buie has called attention to definite fistulous tracts without demonstrable internal or primary opening. These he attributes to an infection of the crypt being transmitted by way of the lymphatics through the bowel wall without producing an internal opening. It would be reasonable to assume that in some instances the internal or primary opening may close over and heal by thin scarring, leaving little evidence of its origin. Our patient either toughs it out until it ruptures spontaneously or it is opened in the office and the patient goes happily along thankful for a cure from a terribly painful condition—when all we have done is relieve infection under pressure and complete a fistulous tract. If the fistula began inside the rectum all measures short of removal of the entire tract and its internal opening are inadequate.

Why do fistula operations fail? Chiefly because the internal opening has not been found and removed. Paste and dyes must be relegated to the past when we have so easy and so sure a method of tracing out these tracts. A gentle dilatation, not divulsion of the sphincter muscles, allows us adequate room to work. A soft silver wire probe is gently inserted into the external or internal opening and allowed to find its way along the tract until it finds its exit inside the rectum or through the secondary opening. No effort is made to force it along a false course and with patient, persistent effort little difficulty will be encountered. The ends of the silver wire are brought together, clamped, to be referred to later. One Pennington clamp is placed along the anal margin in each of the four quadrants and attached by rubber bands to the linen. Three groups of hemorrhoids, frequently the fistulous opening, the anal fissure and the anal ulcer, present themselves invitingly to be dealt with in a surgical manner. If the internal opening of the fistula is deep to the internal sphincter the method of choice, in our experience, is to divide the operative procedure into two stages, the second stage being done in the office under local anesthesia. Incontinence is an unhappy reminder of some rectal operations and can be prevented entirely if certain principles are adhered to strictly. If the exposed ends of the sphincter muscle are not already embedded in scar tissue then we feel it advisable not to cut the muscle at this stage, using instead a heavy silk seton around the muscle, completing the operation and later cutting the muscle at right angles after its exposed ends have been anchored in scar tissue. In this manner the patient does not know the muscle has been cut, an incontinence does not occur. It must always be kept in mind that more than one opening may exist. It is possible to have one primary opening independent to another, particularly if we are dealing with so-called "complicated fistula." It is also true a tract may run up the bowel wall, emptying again into the bowel at a higher level.

In the majority of fistulous conditions we believe in a radical hemorrhoidectomy along with the fistulectomy. This is judged by the amount of involvement at the time of operation. Each hemorrhoidal mass is brought into view with a Hershman clamp, its base being doubly ligated with plain catgut. The hemorrhoid is then removed from its base outward and anchored with the same suture used to ligate the pedicle. Each group is ligated on a different plane as a precaution against stricture formation. As the fissure will almost always be found in the posterior anal canal, due to its mechanism of production, and the increased fecal current pressure of this area, it may be excised easily with the right posterior accessory hemorrhoidal mass. Similarly the anal ulcer may be included with one or another group of hemorrhoids. Care should be used to remove completely the ulcer, and caution would advise the pathological examination of these ulcers to establish definitely their probable benign character. If the base of each hemorrhoid has been ligated properly, the operation is remarkably free from bleeding. A very small artery will be found to accompany the sphincter, its bleeding point being ligated independently. Intercommunicating hemorrhoidal tissue is broken up by running the sharp point of the scissors under the intervening mucosal flap, destroying all varicosities. These intervening mucosal flaps must be left in between each raw surface as they act as grafts from which the new rectal mucosa grows rapidly. We now return to our silver wire probe in the fistulous tract. The entire tract is removed to a "V" fashion, the edges removed sufficiently to prevent bridging over. The tract should be investigated well, for not infrequently will we find additional burrows leading off from the main tract. These must be dealt with in the same manner. The Pennington clamps are then removed, one at a time and the skin edge corresponding to the removed hemorrhoidal mass is then excised along the anal margin. In mild cases of pruritis ani these denuded skin areas are made larger to include a greater portion of the involved anal skin. In extensive pruritis the intervening skin is then under cut, so as to destroy the sensory nerve endings and small strips of rubber tissue placed beneath the undermined skin for a period of 48 hours. In this manner we destroy the hypersensitive nerve supply without producing a slough. Our prestige and conscience will not allow us to follow Buie's treatment of alcohol injection with its consequent anal slough. Following the completion of the operative procedure an anoscope is inserted into the rectum and all accumulated blood removed. A soft rubber tissue drain well lubricated with 60% cod liver oil ointment is placed in the anorectal canal with a generous application along the anal margin. If the operation is extensive we use a small amount of diothane solution subcutaneously for postoperative comfort. Several small rolls of gauze are then placed against the anus and the buttock pulled together with adhesive. Eighteen to twenty-four hours later the dressing and drain are removed and the patient begun on hot sitz baths every four hours while awake. No effort is made to prevent bowel movements; rather they are encouraged. The patient is given fluids and a residue free diet and the night following operation begun on emulsified mineral oil. The first bowel movements are not hard and painful, the patient frequently passing a soft stool without undue discomfort. If necessary, elimination is encouraged with a small plain water enema. On the third postoperative day the anal canal is generously covered with either Gastons Purple Glue, pontocain, diothane or nupercain ointment or 60% cod liver oil ointment and the gloved index finger gently inserted into the anorectal canal. This may be made less painful if the patient can be convinced of the necessity of not tightening up the sphincter muscles. As the finger is slowly inserted, soft agglutinations can be felt to break up and the finger is brought out along the course of fistulectomy, so that the tract will heal from its base. These treatments are carried out every second, third or fourth day as one feels the rectal canal being epithelial. New skin rapidly fills in the denuded areas more quickly than the mucosa is regenerated and the fistulous tract is filled by scar tissue. What apparently was an extensive fistulectomy will soon transform into a small painless scar. By the seventh postoperative day the patient is able to return home to continue sitz baths, diet and emulsified mineral oil, returning to the office for treatments. The longest total disability from work has been three weeks, some having returned to work on the tenth postoperative day. This depends on the extensiveness of the operative procedure, the susceptibility of the patient to pain and the individual recuperative factor, variable in each patient.

I feel very sincerely that injection treatments have no place in my own personal practice. Some of the most appalling atrocities of anorectal ignorance have been found indiscriminate injection treatments. Within the past year a patient was referred to us who had had numerous injections and dilatations for an unrecognized advanced carcinoma of the rectum. It may be true that good results are obtained in some hands by injection treatments but I doubt the permanence of the "cure". Benign growths, strictures of the rectum and lymphopathia venereum will not be discussed. Cancer of the rectum should always be suspected on any patient even before the "cancer age", who has had a definite change of bowel habits. This condition can only be benefited if found in its operable stage.

I shall always be deeply grateful to the late Dr. Cecil Gaston for my three years' association with him. To be in his presence for a short time was convincing proof of the necessity for sound surgical principles applied to the field of proctology.

REFERENCES

The Modern Care of Anorectal Fistula, by Cecil D. Gaston, M.D., F.A.C.S., F.A.P.S.

The Southern Medical Journal. Vol. 31, No. 9.

Recto-urethral Fistula: An Operation for its Cure, by Cecil D. Gaston, M.D., F.A.C.S., and A. B. Lee, M.D., Birmingham, Ala.

American Journal of Digestive Diseases and Nutrition Volume 11, Number 12.

American Journal of Digestive Diseases and Nutrition, Volume 2, Number 10, by Cecil D. Gaston.

Practical Proctology, by Louis A. Buie, A.B., M.D., F.A.C.S.

Jones, Thomas E.: Early Diagnosis and Treatment of Carcinoma of the Rectum, Southern Medical Journal, 34:35 (Jan.) 1941.

Granet, Emil: Pruritus Ani: The Etiologic Factors and Treatment in 100 Cases, New England Journal of Medicine, 223:1015 (Dec. 19) 1941.

Warshaw, David: Surgery of Rectal Diseases by Electrothermic Methods, Based on 1,100 Cases, American Journal of Surgery, 41:437 (September) 1938.

Fransler, Walter A.: Diagnosis and Office Treatment of Rectal Diseases, Journal-Lancet, 58:385 (September) 1938.

Robb, Douglas: The Diagnosis of Rectal Disease in General Practice, New Zealand Medical Journal, 39:29 (February) 1940.

Lee, Maurice: Treatment of Partial Prolapse of the Rectum by Perirectal Injections of Sylnasol, Preliminary Communication. Proceedings of the Royal Society of Medicine, 32:1499 (September) 1939.

McIntyre, W. Kress: Pregnancy and Rectal Diseases, Journal of the Missouri State Medical Association, 36:114 (March) 1939.

Steindl, H.: Clinical Symptoms and Pathology of Melanosis of the Rectum and Sigmoid, Arch. F. klin. Chir., 191:60, 1938.

Lockhart-Mummery, J. P.: Rectal Prolapse, British Medical Journal, 4076:345 (February 18) 1939.

Rankin, Fred W.: The Choice of Operative Methods for Carcinoma of the Rectum. Surgery, 7:667 (May) 1940.

Rankin, Fred W., and Graham, A. Stephens: Cancer of the Rectum and Rectosigmoid: Diagnosis and Treatment, American Journal of Surgery, 46:18 (October) 1935.

Schauberger, W.: Teratoma of the Rectum, Zentralblatt fur allgemeine, Pathologia und pathologische Anatomie, 70:161, 1938.

Hummel, H. G.: Adenoma of the Rectosigmoid and Its Relationship to Carcinoma of the Rectum, Journal of the Arkansas Medical Society, 36:203 (February) 1940.

Preusser, W. F.: Villous Tumor of Rectum, New York State Journal of Medicine, 8:51 (January 1) 1938.

Haws, N. W.: Anal Fissure and Irritable Anal Ulcer, Kentucky Journal, 35:269 (May) 1937.

Gabriel, W. B.: Treatment of Hemorrhoids, British Medical Journal, 2:1266 (December 30) 1939.

Manheim, Sylvan D. and Druckerman, Leonard J.: The Limitations of the Injection Treatment of Hemorrhoids, New York State Journal of Medicine, 39:1473 (August 1) 1939.

Deaver, J. Montgomery: The Diagnosis and Surgical Treatment of Rectal Diseases, Pennsylvania Medi-

cal Journal, 42:125 (November) 1938.
Silbermann, Maurice: Anal Fissure and Its Non-Operative Treatment, Virginia Medical Monthly, 62:376 (October) 1935.

DISCUSSIONS

Dr. George W. Wallace (Biloxi): Dr. Wolford's paper on anorectal diseases shows that he has made a thorough study of the problems implicated and has evolved a workable plan to accomplish the best possible results. In the minds of the patients, itching ani, piles and fissures are the outstanding entities, and in fact are the more common conditions dealt with by the doctor who always examines his patient. However, from the group of possibilities does the astute examiner designate the condition present.

In the mental picture one must have pruritis ani, hemorrhoids, fissures, abscesses, fistulae, cancers, ulcers, polypi, cryptitis, proctitis, prolapse of rectum, strictures, etc.

Dr. Wolford has pointed out, one must have a picture of the normal anatomy and be able to differentiate minutely.

Each of these is important and a clear picture of the possibilities must ever be in the mind to diagnose correctly and treat effectively.

We select the anorectal fistulae to stress.

A fistula is the result of an abscess in the anal region which has been untreated and allowed to rupture or improperly opened and not permitted to heal from the bottom.

A traumatic fistula is possible.

Two factors are responsible for abscesses of this region degenerating into a fistula: 1. nature's imposed motion of the parts preventing the surfaces of the fistula from adhering and, 2. feces and mucus keeping the tract open and preventing healing.

A fistula, then, is in reality the tubular contracted remains of an abscess and is lined by a pyogenic membrane.

A complete fistula gives a direct communication between the bowel and the surface of the skin. An incomplete fistula would be lacking in one of these openings. A submucous fistula with both openings on the mucous membrane may occasionally be found and usually begins in a crypt of Morgagni and ends further down on the mucous membrane. Leaving out the tuberculous fistulae one would be dealing with simple complete fistulae, blind external, blind internal, and submucous fistulae. The simple complete fistula, the remains of an abscess, is a channel leading from the anal canal or some point in the rectum to the outside skin, usually opening within one or two inches of either side and below the anal aperture.

We shall not complete this description or offer treatment, but this in a way illustrates what one must know to make a diagnosis. A woman, whose previous x-ray findings and thorough digital examinations furnished no evidence, came to us. Pains in the abdomen, irregular bowel actions, and loss of weight were significant. X-rays (unfortunately, none diagonal) showed nothing, but an examination with a sigmoidoscope showed a well developed cancer at recto-sigmoid area. This was further proved at operation.

I wish to be permitted a diversion to stress infections of the rectosigmoid, where the signs of inflammation and tenderness may range from a mild to an extremely marked degree.

Without discussion, we suggest that from the local involvement, infection may be carried to distant parts of the body: 1. by the blood stream to the liver setting up periportal hepatitis and cholecystitis; 2. by way of the lymphatics to the pelvic and abdominal structures; 3. by way of the general circulation, overcoming liver barriers and passing through the inferior vena cava and reaching and involving structures beyond. I believe we shall see more of this in the literature of the near future.

Dr. Wolford has covered, creditably, a large field in a short paper, and I feel privileged to have been at this meeting to hear it.

Dr. T. E. Ross (Hattiesburg): The essayist has given us an excellent presentation of the modern conception of handling the more commonly found ano-rectal conditions. Probably in no field of surgery is the confidence and coöperation of the patient more essential for satisfactory results.

When an individual goes to a proctologist it is naturally assumed that he, or she, has an anorectal disease, but often the general surgeon laboriously has to dig out the history and facts that will lead him to consideration of such conditions.

The deceased Dr. Isadore Dyer, one time dean of Tulane Medical School, distributed at a Phi Chi banquet, during my senior year, a sheet containing many aphorisms, only one of which has stuck in my mind, "One finger in the mouth and one in the rectum makes a good diagnostician." This statement has been of great value through the years.

The individual surgeon may differ with the essayist on some minor points of technique, but there are several principles that I would like to commend and stress their importance. One is the securing of a sufficiently safe hemostasis. Another is not closing the wound too tightly, and thereby providing adequate drainage. It is a source of never ending wonder to me that the wounds left by surgery in this area heal as well as they do, but often the case that looks worst, when you get through, gets the most satisfactory result afterward. Another principle to stress is the postoperative care of the patient. This must be pursued diligently and in person, because the average surgeon in this region does not have assistants as thoroughly grounded and trained as he is, and in this after care and seeing that our patients are kept as comfortable as possible, we will win disciples who will go out and counteract the present day idea among the laity that rectal surgery is such a fearful ordeal.

Modified Episiotomy Report On Seventy-Six Cases*

M. MURPH SNELLING, B.A., M.D.
GULFPORT, MISS.

RECENT WORKS by many obstetricians have revealed that labors are shortened, fetal mortality lowered, and the dangers of tears into the rectal tissues virtually removed by episiotomy. All these facts, particularly the shortening of the second stage of labor, and also that in nearly every instance the patient is anaesthetized, have fast become a boon to the parturient.

Our object today is to explain a method of episiotomy which we have approved and used for the past fifteen years and which we have employed altogether for the past five years. I shall now attempt with the aid of charts to give a fair myologic and anatomic description of our technique.

As you all know the levator ani muscles insert through fibers, which shelve obliquely into the median raphe and downward to their coccygeal insertion. This muscular wall offers a slanting bulwark to the descending part. A more opposing force may be considered as offered by those muscles entering directly into forming the lower part of the vaginal canal or outlining its lower boundaries. The natural longitudinal and circular muscular fibers of the vaginal canal are re-enforced in the front portion by the bulbocavernosus medially, the ischiocavernosus laterally with a fascial connective tissue between the two insertions. At their insertions the fibers of these muscles mix intimately with the transverse perineal muscle, which offers the lower boundary, fixes the perineal body, and is actually the dividing line between the rectal structures and the vaginal vault. The bulbocavernosus is the muscle which must be partially served in the midportion, if the strain of the advancing part is to be offset and dissipated laterally instead of downward through the less resistant median raphe and perineal body.

The patient is anaesthetized with ether. When she is sufficiently narcosed the external labia on the left is grasped with the nurse's fingers and retracted laterally. The internal labia and wall of the vaginal canal are grasped between the index finger and thumb of the operator's left hand. The index finger, first being passed well into the canal and hooked, now pulls the muscular segment forward and also protects the descending part. This tissue is gathered between the two fingers at a point almost midway between the anterior and posterior commissures. At times the incision is made a little nearer the postcommissure. The left wrist is flexed downward and there is room for the insertion of a scalpel held in the right hand.

An incision 1 inch long and $\frac{1}{4}$ to $\frac{3}{8}$ inch deep, running longitudinally to the axis of the canal, and transverse to the striped muscular fibers, is now made through the musculo fascial wall and one-half way through the bulbocavernosus. The external limit of this incision is just inside of, but not into the skin of, the labia minora.

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*Read before the Mississippi Chapter of the American College of Surgeons at Edgewater Gulf Hotel, Gulfport, Miss., January 31, 1941.

As the part advances this incision may widen somewhat or tear a little deeper; but seldom is this increase extensive.

When the placenta is delivered, a roll of sponges, anchored by a piece of umbilical tape, is passed into the canal until it rests well against the cervix.

A nurse moves the standing light up until it shines clearly over the operator's left shoulder. The assistant then retracts the external labia laterally. Four interrupted chromic sutures are used to close the episiotomy incision. These are put in with an achromatic needle and three knots are used to tie. The sutures are then cut short, the pack removed, and if nothing else is needed the patient is allowed to wake up.

During the five-year period mentioned we have performed an episiotomy on 76 patients. Fifty-eight of these were primiparas, nine were multiparas of one or more children in which scar tissue had caused a shortening of the external outlet, and it was believed without episiotomy the damage to the perineum would be too extensive. Nine others were patients on whom an extensive episiotomy had been performed one to five years previously. Eight were breech deliveries, one of these being a hand presentation requiring a version, and two being marginal placenta praevias on which version and extraction was effected. The case of version on the hand presentation was the only infant mortality in the entire 76. The two cases of marginal placenta praevia came through without complications, one was a single birth and the other case was identical twins. The second twin very accommodatingly breech, presented so no second version was necessary.

In these cases we felt as though delivery was speeded up, because the head was more easily extracted through the more widened outlet.

In all 76 cases, which were carefully followed, these facts were evident, when compared to the more extensive episiotomy, which we used to perform:

1. The time interval for suturing the smaller incision was much less.

2. There was less infection, most probably because the skin was not included in the incision.

3. The patients complained of less pain due to the sutures and there was less swelling and edema of the vulva on that side.

4. Examination at the eighth week showed almost first intention healing in the modified cases, while the more extensive cases showed a much more tender perineum, with not quite as good a preservation of the natural anatomical contour.

5. Patients complained of dyspareunia far less often in the more modified cases.

Here may be noted that during these past five years we have completed 11 regular textbook episiotomies, which have not been included in the 76 cases, but which are used as a basis for comparison.

Of the 76 cases, 23 have had another child since the first modified episiotomy. One was from the group of nine, who had extensive scar tissue and on whom a modified episiotomy had been performed 2 years before. The other 22 were biparas and no episiotomy was done. Only in 4 was there a tear and 2 of these were in the old scar and 2 were in the median raphe. Only one was severe, and it was the case with the large amount of scar tissue. However, a repair closely resembling a perineorrhaphy in its extent has apparently restored the patient to a fair degree of normalcy. This one case required a hemorrhoidectomy at a later date. This is mentioned because this factor evidently had something to do with the pain in the perineum. Ever since the hemorrhoids were removed the patient has been well, the perineum is sound and she is not tender in this area at all.

All 23 cases were examined at the eight-week interval and several have been examined since. The perineum was scarcely tender, the contour was still regular, and the muscle wall was preserved. These cases are examined with one gloved finger in the rectum pushing upwards against two gloved fingers in the vaginal vault. The fingers are removed and the patient is requested to strain. It is by these two methods that we judge whether there is a separation of the muscles at the mid-line under the mucosa.

The reason that it was decided not to do an episiotomy on these 23 cases, was because when they reported the subsequent pregnancy, examination showed enough relaxation of the perineum to allow for a non-tearing delivery. Our judgment was wrong in 17.5%. However, when it is considered that one of the four tears occurred in the many times multipara, whose perineum was badly scarred, then it might be said that our premature judgment was responsible for tears in only 13.8%.

Summing up a few facts we are inclined to believe that the more modified episiotomy will serve virtually as well as the more extensive type. Also the comparison earlier in the paper has shown a few probable advantages.

Leucorrhea*

JOHN W. LUCAS, M.D.
GREENWOOD, MISS.

THE DIAGNOSIS and management of leucorrhea is a subject of common interest to both the gynecologist and general practitioner, and often in the present as well as the past, one that presents many difficulties. On account of the frequency with which such cases are referred to me I thought that a paper dealing with this frequent and common symptom would not be without interest. In the beginning I wish to say that no claims are advanced for originality and I will only attempt to present to you a comprehensive survey of what is known today concerning some of the more common types of leucorrhea. Up to a few years ago the general treatment of leucorrhea consisted of vaginal douches with various kinds of antiseptic solutions which gave only temporary relief owing to their cleansing effect and seldom affected a cure. No antiseptic has yet been found which, by means of constant douching, would destroy the offending organisms and not have a similar destructive effect on the vaginal mucus membranes, thus often intensifying the already present discharge. In some cases the cessation of strong antiseptic douches has resulted in a cure of the leucorrhea which has been present for long periods.

In recent years great advances have been made not only in regard to the etiology and pathology of leucorrhea, but also on the physiology of the normal vaginal secretion. The monumental work of Cruikshank and Sharmon has shown that important histological and chemical changes are produced in the vagina at different periods of life and that these changes are dependent on the level of female sex hormones in the blood. They showed that at birth and for the first week of life the vagina was strongly acid and bactericidal having a pH of 4.0 to 4.4 with a creamy white, often copious secretion present and within the first week Döderlein's bacilli vaginae are found in almost pure culture. The mucosa consists of a thick stratified squamous epithelium of many layers, the cells of which contain abundant glycogen. This is the effect of an abundant amount of estrin supplied by the mother during the latter months of pregnancy. By the fifth day estrin is absent from the infant's urine and remains absent until puberty. During this period there is normally a scanty secretion which is weakly acid or faintly alkaline with Döderlein's bacilli diminished or absent and a varied vaginal flora appears. The mucosa becomes progressively thinner and atropic with an absence of glycogen. At puberty and during the reproductive life the vaginal secretion changes again under the influence of estrin and again becomes highly acid in reaction and bactericidal, the secretion more abundant, creamy white in color and again growing Döderlein's bacilli in pure culture. The epithelium thickens and again becomes rich in glycogen. At the menopause the secretion and mucosa reverts back to the childhood type due to the diminished or absent estrin effect.

During the latter months of pregnancy when the estrin levels are high the normal secretions are increased, large amounts of glycogen are present, lactic acid increases and Döderlein's bacilli gain the ascendancy. This is nature's effort to produce a healthy condition at this time and reveals the great risk of disturbing this protective mechanism by using douches and local treatments at this time.

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*Read before the 37th Semi-Annual Meeting of the Delta Medical Society, April 9, 1941.

Thus it is well known that in the adult the normal vaginal secretion is not only highly acid in reaction but highly bactericidal as well. Döderlein's bacilli grow in this highly acid medium which contains lactic acid as the result of bacterial and enzyme fermentation of the vaginal glycogen. The normal secretion should be sufficient to keep the walls of the vagina moist but should not soil the underclothes or require the use of a sanitary pad except for the physiological increase which is seen in some women before the menses and during pregnancy. This normal secretion is characterized by a white creamy, slightly mucoid secretion which contains small clumps of desquamated vaginal epithelium with only a few leucocytes. The bacterial flora may be varied but is held in check or rather constant balance by the predominance of the Doderlein bacillus. The normal pH is about 4.0. Variations of these relationships allow other organisms or foreign pathogens to multiply or enter the vagina and produce symptoms. Likewise variations in the physiology of the genital tract at various ages may produce favorable conditions for the entry and growth of pathogenic organisms as seen in vulvo-vaginitis of children and the senile vaginitis of the woman after the menopause.

I wish now to discuss briefly some features of the clinical examination of patients presenting the symptom leucorrhea, after which I will discuss with you more fully the common conditions seen 1) in children 2) in the woman during menstrual life and 3) after the menopause. No attempt will be made to enumerate or discuss all of the many causes of leucorrhea, for they are too numerous.

Leucorrhea is generally accepted as any discharge, other than blood, in more than normal quantities from the female genital organs. It is never a diagnosis but is always a symptom of some underlying pathology. In the clinical investigation a careful history is as important as in a case of pain or hematuria. It is wise to determine the time of onset, character, consistency, odor and effects produced by the discharge. The accompanying symptoms and time of the menstrual cycle when the symptoms are exaggerated is important. It is always wise to inquire tactfully as to the husband's health. A general physical examination and routine laboratory tests are as important in the diagnosis of leucorrhea as any other complaint. Anemia, diabetes and malnutrition may be the cause of an unexplained vaginal discharge. The most essential part of the examination is to see the discharge and determine where it is coming from. The character of the discharge will often give a clue as to the etiology. A mucoid discharge when verified by microscopic examination by lack of pus cells will help rule out an infective process and point to an increased physiological secretion or local pelvic congestion. A frothy or bubbly discharge will make one think of Trichomonas, while gonorrheal discharges are always thick and pussy. A foul, odorous discharge should make one think of a malignant process or a foreign body. A thin watery discharge is common in senile vaginitis. The vulva is first inspected and Bartholin's and Skene's glands are gently massaged to obtain specimens of the secretion. Specimens from the urethra, cervix and vagina are obtained with a platinum loop and spreads made for staining with methylene blue and Gram's method. Also a warm saline suspension is always made for immediate observation for Trichonomas or Monilia. The pH of the discharge is also determined. Next the mucus membrane of the vagina and cervix is inspected through a Grave's speculum with the aid of a good light. Unless there is an acute urethritis a catheterized specimen of urine is obtained at this time. Not uncommonly the same organism causing the leucorrhea will also be found in the urine. After emptying the bladder a bimanual examination is made for determination of any pelvic pathology. Often persistence of pelvic congestion caused by tumors, retroversions or chronic infections will cause a persistence of leucorrhea in spite of local treatments.

In the pre-adolescent or adolescent girl it is often necessary to examine them under anesthesia. It is a shame that these patients are so often ignored or inadequately treated on account of the time honored sanctity of the hymen. Insufficient drainage due to an almost imperforate hymen is no doubt the cause of many cases of endocervicitis, erosions as well as adhesive vaginitis and could be avoided if these patients were treated earlier. In examination and treatments of children the knee-chest position is most valuable as air distends the vaginal walls and visualization as well as treatments are simplified. Foreign bodies, not uncommonly found as a cause of leucorrhea in children, can often be removed without an anesthetic when the child is placed in this position.

In children the great majority of cases of leucorrhea are due to a vaginitis or vulvovaginitis, and the gonococcus is responsible for most of these infections. Rarely there is a history of rape and nearly all of them are infected through contacts with other children, an infected nurse, the bed-linen, toilet seats or contaminated hands. The vaginal mucus membrane in childhood and before puberty, as mentioned in the previous discussion of the physiology of vaginal secretions, is quite thin, consisting of only a few layers of squamous epithelial cells and the reaction of the secretion is weakly acid or faintly alkaline, which is most conducive to the rapid growth of the gonococcus; in the adult the vagina is more resistant to this infection on account of the highly acid secretion and the thick epithelial layers of the mucosa. Skene's and Bartholin's glands, as well as the glands of the cervix, do not reach full histological development until puberty and therefore are not liable to become infected by the gonococcus during childhood.

Formerly the treatment of this condition in children was most unsatisfactory but in 1933, Lewis, of Yale, found that by injections of estrogenic substances he could transform the highly susceptible infant's vaginal mucus membrane to the more resistant adult type. In this manner he obtained fairly satisfactory results. In 1935 TeLinde obtained much better results by giving the estrogen in the form of vaginal suppositories. The average patient is now cured in one month by the insertion each night of an estrogenic suppository containing 1000 I U . Smears are taken each week and treatment is continued for two weeks after the first negative smear is obtained. Recurrence of the infection seldom occurs and is most probably due to re-infection.

More recently others have claimed that these cures were not due to the increased thickening of the mucosa of the vagina but were due to the increased acidity of the vagina which occurs under the influence of estrogenic substance. Karnaky, of Houston, Texas, claimed to have obtained as good results with the use of an acidulated glucose-lactose table that increases the acidity of the vagina. His results have not been confirmed by others and at the present time it is the concensus of opinion that estrogenic suppositories give the best results. Sulfanilamide has been used by many in the last few years with a wide divergence of opinion as to its effectiveness. Some cases respond very promptly within two weeks, while if cure is not obtained in this length of time continued treatment or repetition of treatment will not produce results. Other cases of vulvo-vaginitis of childhood are classed as non-specific but increasing numbers of Trichonomas and yeast cell infections are being found. Foreign bodies should always be thought of if the non-specific type fails to clear up under the usual treatment.

Leucorrhea in the adult of vaginal origin is most often caused by the Trichonomas vaginalis. Its exact origin is unknown. Formerly some authors claimed it to be of intestinal origin, that its morphology was changed when it was introduced into the changed environment of the vagina. More recently the experiments of Kessel and Gafford failed to support this theory. They observed that experimental implants of Trichomonas vaginalis in human and monkey vaginas resulted in infection, while attempts to infect human and monkey vaginas with Trichomonas intestinalis ended in negative results. Hibbert and Falls claim that there is no definite proof that it is a pathogenic parasite and feel that an associated streptococcus is the cause of the vaginitis. Clinically this seems of little importance as practically all cases with Trichomonas vaginalis in the vagina have some symptoms which are relieved when the protozoön disappears, and on recurrence of the symptoms examination reveals the Trichomonas.

The symptoms of this type of vaginitis range from a small amount of leucorrhea which causes a mild irritation to a profuse flow accompanied by an itching which is almost intolerable. The symptoms are exaggerated immediately after the menses. The most common site of the itching is just within the introitus, but in some cases it is worse externally between the folds of the vulva and on the inner surface of the thigh. It is usually very irritating to the skin and is characterized by a greenish-yellow frothy discharge with a very offensive odor. The vaginal walls are reddened and small petechial hemorrhagic areas are usually present, having given rise to the term strawberry vagina. These areas are most pronounced over the anterior fornix and the portio of the cervix. The discharge is neutral or weakly alkaline in reaction and diagnosis is easily made by examination of the secretion mixed with a small amount of warm saline on a slide and using a cover slip to examine under low and high power magnification. The pear-shaped, actively motile organism is easily recognized. No staining is necessary; in fact it is difficult to make the diagnosis on a stained specimen, as the motility of the organism is one of the most characteristic features and enables one to identify the organism. The organism is most easily found immediately after the menstrual period and when no douche or treatment has been given before the examination.

There have been many treatments advocated for this type of leucorrhea and I have tried nearly all of them. Almost any method is successful in the majority of cases but none has been successful in all cases. These patients usually obtain almost immediate relief and are most grateful but not infrequently there is a recurrence after the next menstrual period. It is best to warn your patient of the danger of recurrence and to treat her through at least three menstrual periods with negative slides. As the organism thrives in a neutral or alkaline medium, it disappears when the vagina is kept distinctly acid. I usually dry the vagina well after washing it out with ether or a piece of cotton and insufflate the vagina with either floraquin powder or a simple powder containing beta-lactose. This is repeated for three to four treatments and then the patient is advised to take douche each night with four tablespoonfuls of white vinegar to two quarts of warm water after which they insert two floraquin tablets high in the vagina. These treatments are continued through the menses. Condoms are advised during coitus until the patient is discharged, to prevent reinfection of the husband. At the same time the general health is taken care of. It is essential to keep the pH of the vagina highly acid to get results.

Next to Trichomonas vaginalis, vaginal thrush or mycotic vaginitis is probably the most common cause of leucorrhea seen in private practice. It is due to a fungus of the Monilia group and causes a thin watery discharge, frequently containing white cheesy-like flakes and is accompanied by a severe itching or burning which is worse before the menses and is very common during pregnancy. It is nearly always present in a so-called diabetic vulvitis. Examination of the vagina often reveals a reddened, edematous mucosa with small areas of caseous material beneath which is revealed a small bleeding ulcer. The diagnosis is made by obtaining a small portion of this material on a slide and examining it under a wet film preparation or with Gram's stain. The yeast-like organism is strongly gram positive.

The control of diabetes usually clears up very rapidly the cases of diabetic vulvitis. The Monilia grows best in an acid medium, a fact of clinical importance, for the discharge is worse just before menstruation and during pregnancy, both periods in which the excess of vaginal glycogen brings about a highly acid secretion of lactic acid. It usually clears up spontaneously after delivery. Treatment consists in painting the vagina and vulva with a one to two per cent gentian violet solution every other day, which usually gives spectacular and gratifying results. One-fourth to one-half strength Lugol's solution may be used in the occasional case that appears to be sensitive to the dye or which fails to respond to the application of the dye.

Other common causes of leucorrhea in the adult female include infections of the cervix which may be (1) specific or gonorrheal in origin and (2) non-specific infections that follow abortions, labor or instrumentation of the cervix.

Gonorrheal infection as a cause of leucorrhea in my experience is seen much less frequently than Trichomonas or mycotic infections of the vagina. Bartholin gland abscess is occasionally encountered as due to gonorrhea but much more often is due to the Trichomonas or Monilia. The urethra, Skene's glands and the endocervical glands are common sites of infection. The discharge is purulent and is alkaline in reaction and therefore often succeptible to secondary infection with the Trichomonas. Diagnosis is made by examination of the smear with methylene blue and Gram's stain.

Active local treatment of the discharge in acute infections is not only useless but dangerous, in that any manipulation may result in extension of the disease to the tubes. Rest, physical and sexual, and the use of sulfanilamide or sulfathiazole is now the established method of treatment. After the acute symptoms have subsided the application of local pelvic heating by the use of the Elliott machine is advocated and douches are used only for cleanliness. Pelvic heating, if persisted in, will cure the majority of cases. A few that fail to clear up will require destruction of the cervical glands by the use of the nasal tip cautery, Hymen's conization or by electrocoagulation. It is important not to cauterize too high in the cervical canal, as strictures are liable to occur.

Non-specific cervical leucorrhea is the result of infection by any of the organisms found in the vagina and occurs usually following abortion, childbirth or instrumental trauma to the cervix. The primary lesion is a laceration followed by endocervicitis, erosion, healing of the erosion and chronic cystic cervicitis. The erosion is caused by the constant bathing of the stratified squamous epithelium with the alkaline muco-purulent discharge from the infected cervical glands causing a destruction of the epithelium of the portio which normally lives in a slightly acid medium. This raw surface is a true erosion and under the influence of the alkaline cervical secretion is epithelialized with columnar epithelium growing down from the cervical canal producing what is usually clinically called an erosion but is in reality the first stage of healing of an erosion.

To cure this condition it is necessary to cure the infection in the glands of the cervix and to remove or destroy the local lesion. This is best accomplished by cauterization of the endocervical glands with the nasal tip cautery and making linear cauterizations beginning at the external os and extending outward to the edge of the erosion. The whole circumference of the cervix must not be treated at one sitting. The anterior lip is first treated and four weeks later the posterior. All areas must be perfectly healed and infected glands destroyed before the patient is discharged. Suspicious lesions must always be biopsied as the majority of malignant lesions of the cervix occur at the site of a previous chronic infection. Rarely it may be necessary to amputate the cervix or do a Sturmdorf operation where the lesion is extensive or accompanied by deep cervical lacerations.

Leucorrhea after the menopause, or so-called senile vaginitis, occurs in elderly women or in younger castrates and is characterized by an atrophic vagina which is cone-shaped, the cervix and vaginal walls revealing small ulcerations and often adhesions. These patients complain of itching and burning in the vagina and have a thin watery discharge often tinged with blood. The condition is due to an absence of estrogenic substance and patients are materially benefited and frequently cured by the use of large doses of estrogenic substances, 10,000 units given twice weekly over periods of one to three months, or by the night-insertion of estrogenic suppositories (2000 I U). Where this diagnosis is doubtful it is essential to rule out carcinoma of the body of the uterus by curettage in the beginning.

In conclusion, all of the conditions which produce this common symptom have not been mentioned in these remarks. They are numerous and at times troublesome but are less frequent than those mentioned. They have not been omitted because they are unimportant but because it would be impossible to correlate all of them and give them the proper attention in a paper of this kind. I have attempted to discuss the more common types of leucorrhea seen in private practice and to stress the importance of a thorough investigation and accurate diagnosis so that treatment can be administered on a more physiological basis as related to the influence of the female sex hormone and the changes in the vaginal flora.

Sulfathiazole in the Treatment of Otitis Media*

DONALD S. HALL, M.D.
VICKSBURG, MISS.

In the past six years the treatment of otitis media has been radically affected by the use of sulfanilamide and its closely related compounds. Numerous reports have been made concerning their use and although some otologists at the present time do not obtain any better results with their use in otitis media than without them, the general trend is toward their acceptance as being of definite value.

Remarkable results have been obtained by using the drug in otitic complications from the very first, but its use in otitis media itself has been slow to come forward. That it is of definite value in complications is borne out alone in meningitis due to otitic infections previous to 1935 when only seventy-five cured cases had been reported in literature, compared to twice that many cured by chemotherapy in only a few months' time after 1935. Galloway, in May 1939, said it was the greatest single factor in controlling otitic complications. Concerning its value in otitis media, there is as yet no evidence that the drug prevents extension of the infection from the middle ear to the mastoid cells, but results in general show fewer mastoid infections following cases of otitis media treated with sulfanilamide than those treated otherwise.

After all, as it is the complications of otitis media that cause long sieges of illness as well as serious end-results, and prevention of these if possible is far more important than treatment of them after they develop.

Nearly all reports so far with chemotherapy in otitis media are concerned with sulfanilamide, which has an action mainly against the beta hemolytic streptococcus. Benefits of sulfapyridine in otitic infections themselves are not enough to be of value yet, but its main action is against the pneumococcus. Sulfathiazole not only has the combined action of the above two but also against the staphylococcus aureus.

A single drug with an action against the two bacterial organisms causing the greatest majority of otitic complications was thought to be highly desirable in the treatment of otitis media. Specific treatment could be begun with reasonable assurance as soon as a culture from an infected ear was taken, or even before external drainage was necessary. Time for growing and typing a culture before giving sulfanilamide or sulfapyridine need not be wasted, and one would not have to wonder which of these two to give in an early case even before having to do a myringotomy. Besides its multiple bactericidal action, sulfathiazole was less toxic than sulfapyridine and no more so if not less than sulfanilamide.

This report is on a group of eleven patients treated at the Vicksburg Sanitarium, from November 1940 through March 1941.

Nine cases were suppurative and two nonsuppurative. The ages of the patients ranged between 15 years and 48 years. Seven patients were male and four were female. Ten cases were unilateral and one bilateral.

Nasopharyngitis was the preceding cause in nine cases, measles one case, and acute purulent ethmoiditis in one case.

Cultures taken from the discharge showed pneumococcus type III in two cases, pneumococcus type I in one case, streptococcus haemolyticus in one case, staphylococcus aureus in one case with pneumococcus type III, B. pyocyaneus in one case, staphylococcus albus in one case, and no growth in three cases. The average temperature of the patients when first seen was 100.4°. Blood counts were taken on all cases with virulent cultures, patients with severe symptoms, or cases receiving sulfathiazole more than three days. The average total white blood cell count of those taken was 10,050. The average red blood cell count was 4,305,000.

Myringotomies were done on all drums that were red and definitely bulging, otherwise local medical treatment along with sulfathiazole was given. In two cases where this was tried the infection subsided without myringotomy. In another case where this was attempted the ear had to be opened in twenty-four hours. In one case where local medical treatment was tried without sulfathiazole, the ear had to be opened in one day; in one case where sulfanilamide was given, the ear had to be opened in four days. Of the nine suppurative cases, either by spontaneous opening or by myringotomy, the drum was opened in an average of 1.8 days from the onset of symptoms. Spontaneous openings resulted in three cases but all had adequate drainage until the infection subsided, without enlarging the opening.

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The type of drainage varied from a thin bouillon appearance to that of thick yellow pus. Both pneumococcus type III drainages were profuse and thin; the streptococcus haemolyticus gave a thick tenacious yellow-brown discharge; the staphylococcus aureus resembled that of staphylococcus albus—a thick yellow pasty consistency.

The duration of drainage after the drum was opened varied from 2 to 22 days, the average being 7.4 days. The longest period of drainage was in the case of infection with streptococcus hemolyticus, the shortest in one case where the culture showed no growth. In this case however, sulfathiazole had been given for twenty-four hours before the myringotomy was done and undoubtedly had some influence on the growth of the causative organism.

Out of the group, the cases with the virulent infections as a whole—two of the pneumococcic infections, the streptococcus haemolyticus infection and the otitis media complicating measles—drained the longest, however, in each one the drainage was almost negligible after six days.

Three cases were hospitalized—one because of moderately marked nausea and vomiting which cleared up in twelve hours after discontinuing sulfathiazole; one because of mastoid pain, the suspicious nature of the drum and a profuse pulsating exudate; and the third because of severe pain in the ear and temperature of 103.1°.

Three cases developed mastoid pain and two cases mastoid tenderness. One of these when first seen had a red drum but no bulging and no pain, so conservative treatment without sulfathiazole was begun. Instead of returning the next day as told, the patient returned four days later and mastoid symptoms in the meantime had developed. A myringotomy was then done and sulfanilamide begun. Mastoid tenderness remained for five days, then sulfathiazole was begun and the mastoid pain left in twenty-four hours. An x-ray of the involved mastoid cavity showed very early haziness of the cells as compared to those of the opposite side. One case continued to have shooting pains in the mastoid region with profuse pulsating thin straw-colored exudate for 3½ days and then all of these began to subside rapidly. The third case had mastoid pain and tenderness for two days after sulfathiazole was given but then disappeared completely.

As just mentioned, the first case where sulfathiazole was used very good results were obtained. At the time of the myringotomy the patient was placed on sulfanilamide because of mastoid pain. The culture made showed no growth but the sulfanilamide was continued. Such quantities of thick yellow purulent exudate kept draining that another culture was taken, which showed pneumococcus type I. The sulfanilamide which had been given for five days was discontinued and sulfathiazole begun. In twenty-four hours the mastoid pain had stopped and in three days the aural discharge was hardly noticeable. In eight days all symptoms had disappeared and the drum had healed. In the next few cases sulfathiazole was used only in the cases requiring myringotomies but begun at the same time the smear and culture were taken. Such good results were obtained that it was finally given in every definite acute otitis media whether the drum needed opening or not. Sulfanilamide was continued on one other case because the patient had been given the drug out of town and his infection was responding favorably.

The dosage was the same for all of the patients as they were all adults and were able to tolerate an equivalent amount. Extremely large doses were not given because results were gratifying with moderate doses and it was thought best to maintain a constant blood level rather than intermittent high levels, early treatment being one of the essential requirements. Two grams were given by mouth for the initial dose then one gram every four hours day and night until stopped. This was not done until the culture was negative, the profuse discharge checked, and the patient entirely free of any mastoid signs or symptoms for at least twenty-four hours.

No serious complications resulted from the toxic effects. All of the patients complained of a lack of energy and varying amounts of weakness, usually beginning after taking the drug twenty-four hours. Three patients felt dizzy and two had nausea and vomiting of a moderate degree which began after taking the drug sixteen hours and forty-eight hours respectively. This latter one developed drug fever also.

Four blood counts that were made after prolonged dosage showed no fall in hemoglobin and no significant changes in the red or white blood cells.

All cases resulted in a dry ear with good hearing. Five of them had a virulent type of organism, which judging from previous similar cases seen, would have resulted in one or two mastoidectomies, if not a more serious complication.

Conclusions drawn from these cases are:

1. The number of suppurative cases of otitis media was reduced by the use of sulfathiazole.
2. Suppurative cases of otitis media receiving sulfathiazole had a shorter period of drainage than previous similar cases seen not receiving this drug.
3. Cases of otitis media treated with sulfathiazole developed no complications regardless of the severity of the infection.
4. Sulfathiazole is effective against the streptococcus hemolyticus, the pneumococcus and the staphylococcus aureus and may be given before myringotomy with reasonable assurance, or at the time of myringotomy without having to wait for a report of the culture.

That the severity of infections and the affinity of bacterial organisms vary for different years must be taken into consideration, but these results are better than I have seen with any other type of treatment, so far.

DISCUSSION

DR. ROSS E. ANDERSON (Jackson): I do not share the enthusiasm of some men with regard to the use of sulfanilamide and its derivatives in the treatment of otitis media. I believe it is a useful drug in some cases, but to say that it is a cure-all for everything is sheer nonsense. I still believe in the practice of otology with proper regard to the pathology and the appropriate medical and surgical treatment. I overheard a conversation of a group of physicians a few months ago who appeared to be elated over the fact that sulfanilamide had ruined the ear, nose and throat profession; that it had done away with mastoidectomies and various kinds of surgery; that it would cure anything just by the giving of it.

When a case comes in, the first thing to do is to determine whether the case is acute, subacute or chronic. If the case is acute and has a perforation in the drum with a discharge, take a culture and determine the offending organism. If the opening is too little, enlarge it so as to insure adequate drainage. If the case is acute and the drum needs opening, do a paracentesis, or a myringotomy, establish drainage, and then take a culture also. Sulfathiazole is supposed to be a specific for staphylococcic infections, but it is claimed by many men today that they are getting better results with it in streptococcic and pneumococcic infections than they are with sulfanilamide and sulfapyridine. Any case of otitis media is a potential case of mastoiditis. If any signs of mastoiditis appear, x-ray studies should be made, as well as blood counts, blood cultures, and in case of any signs of intracranial complications a lumbar puncture should be done and the spinal fluid examined. This should be done very cautiously in cases of suspected brain abscess and not more than two cc. of spinal fluid should be withdrawn. The streptococcus mucosus capsulatus (Pneumonia Type III) is a very dangerous type of infection insofar as intracranial complications are concerned, and the symptoms are often very mild, and certainly cultures, laboratory work, x-ray studies will help in this type of case. In the discharging acute ear, whether ruptured of its own accord or opened by the otologist, the ear canal should be cleansed daily either by mild suction or dry tampons, alcohol and boric acid drops should be instilled, heat by means of an infra-red lamp, elimination, codein for relief of pain, alkalinization, proper diet, rest in bed, and vitamins should be given. The nose and throat should be treated as there is usually an accompanying nasopharyngitis. Any systemic disease such as lues, tuberculosis, and diabetes, should receive appropriate treatment, as well as the condition of the mouth, teeth and gums. Sulfanilamide may be started according to the judgment of the surgeon. Most cases will respond without it. I use it in the more severe cases or in those cases which do not show satisfactory progress with the ordinary remedies just outlined. In the chronic cases with a discharging ear, sulfathiazole powder is beneficial. It is especially helpful in the saprophytic cases. The danger of intracranial complications is greater in the chronic cases. Any case of chronic discharging ear with an acute exacerbation, a facial paralysis, or signs of intracranial complications, should have a mastoidectomy performed and the patient started on sulfanilamide. Sulfanilamide has its greatest value in my opinion in the otogenic complications. The chief complications are meningitis, brain abscess, thrombosis, petrositis, and labyrinthitis. Sulfathiazole may be given intravenously in these complications in 5 per cent aqueous solution. In staphylococcus infections staphylococcic antitoxin may also be given with good results.

I take this opportunity of thanking the essayist for bringing to us a very excellent paper. I also thank him for sending me a copy of his paper in advance, so that I might prepare my discussion in writing. I also wish to thank the chairman for giving me the opportunity of discussing the paper.

Dr. E. W. Green (Hattiesburg): The proper evaluation of a drug in the treatment of a specific condition is often difficult. In acute otitis media the value of sulfathiazole and allied drugs has been tried and the reports have been controversial. The number of reports on the use of sulfathiazole are too few for a definite opinion to be formed. The isolated reports are only of suggestive value.

The question that is foremost in my mind is, should every patient with acute otitis media receive sulfathiazole? Is the necessity for surgical intervention and complications lessened where chemotherapy is used? It is difficult for the individual otologist, striving to do his best for his patient, to reconcile reports from clinical centers that are practically contradictory.

There is no question of the value of chemotherapy in treatment of complications of otitis media. The literature is full of almost miraculous cures of meningitis that before the days of sulfanilamide were nearly always fatal. However, there are many reputable men that feel like its value in acute otitis media is overrated. There does seem to be a general opinion that the incidence of mastoiditis has decreased but probably the percentage of complications has increased. It is thought that chemotherapy masks the symptoms and as a result the cases are being operated on later. It is my feeling that where the symptoms point to surgical mastoiditis that one should not depend on chemotherapy to do what a carefully timed and properly performed mastoidectomy will do. I do follow all of my cases postoperatively with chemotherapy.

It is not my policy to use sulfathiazole in all cases of acute otitis media but I do use it in by far the larger percentage of cases. I have not run a series of cases with controls and cultures, but I do feel like my results are better in those cases where I have used the drug. I have had a good many cases of what I thought was a surgical mastoiditis or at least a potential one upon the first visit of the patient to my office. This patient would come in with a history of pain from one to two weeks' duration and would have an ear drum red and markedly bulged and definite mastoid tenderness. I have x-rayed several of them and they would show a definite cloudiness of the cells and to my surprise after paracentesis and the use of sulfathiazole in from forty-eight to seventy-two hours they would be greatly improved and go on to complete recovery.

The incidence of mastoiditis in my practice has reduced from twelve cases last year to two for this year. I do feel like it is definitely more difficult to tell when a patient should be operated that has received any of the sulfanilamide derivatives. It has also been my experience that at the time of operation the pathology found was a patchy type. I feel like Kopetzky is right in his statement that we need a new conception of the indications for operation in cases receiving chemotherapy.

I have enjoyed Dr. Hall's paper and want to congratulate him on going to the trouble of culturing all of his middle ear infections. I must confess that it is embarassing to run into a complication following a mastoid operation and not know the organism that you are dealing with.

Dr. Edley Jones (Vicksburg): There is just one word of warning that I would like to mention; that is, in the treatment of these conditions with the sulfanilamide group we cannot place the dependence on the blood counts which we formerly said. It's been our practice to use the blood count as an indicator and by observing our progress we can determine when surgical intervention will be necessary, if it is necessary. It has been our experience in the use of these drugs that blood counts are of practically no benefit.

We recently had a case of streptococcic infection. The blood count did not seem bad, the x-ray did not seem bad, but the patient was sick. After 24 hours the patient seemed better but on serology we found a very massive infection. We felt that we were very fortunate in insisting on surgery on the basis of the x-ray studies and not placing any dependence whatever on blood studies.

Dr. J. P. Wiggins (Cleveland): I have enjoyed this paper better than anything I have heard in 15 years. We are fully convinced though, that we are getting some results in shortening the duration of otitis media by the use of the sulfanilamide group. Sulfanilamide is probably better in streptococcus infection. I do not know that we are shortening the duration of otitis media and that we are having fewer mastoids than before. I think that under moderate conditions we do not see many mastoids and that is because of the sulfanilamide group.

My experience is that you can't depend upon the blood count as much when you are using the drug as when you do not use it. However, I am convinced that we have something in sulfanilamide. But, like many others of the older practitioners, I have seen so many new so-called cure-alls and theories fail to prove out that I think it is well to keep our minds and ears open.

Dr. Hall (Closing): I am very grateful to these gentlemen for their discussions. Thank you.

Analysis of the Management of the Peptic Ulcer Case

DONOVAN C. BROWNE, M.D.,* and GORDON McHARDY, M.D.†
New Orleans, La.

The literature concerning the many aspects of peptic ulcer management is so voluminous each year that it emphasizes the importance of a review and evaluation of the problem. It is generally accepted that as yet no specific etiology or therapy of this chronic intractable disease exists, that there are definite complications requiring surgical intervention, and that, as yet, we are faced with the three-fold issue of (1) inherent constitutional predisposition to form an ulcer, (2) tissue susceptibility, (3) gastric acidity. In disposing of these the problem quickly resolves itself into two parts: the relief of symptoms with healing of the immediate ulceration, and, secondly, the proper management of the individual to prevent recurrence.

The medical management of gastric, duodenal, gastro-jejunal and esophageal ulcer is generally similar, regardless of what type of treatment may be used. However, to treat gastric ulcer patients medically, the clinician is faced with the burden of differentiating benign gastric ulcers from early carcinomatous lesions either by roentgen or gastroscopic examination. Failure of a gastric ulcer to show definite healing under a properly conducted medical régime of thirty days is indication for surgery. In the handling of the case of peptic esophagitis one must remember that after response of the ulceration and resultant healing constriction may call for esophageal dilatation and divulsion before one discharges his duty in the case.

Rivers has grouped the etiologic factors simply: (1) chemical, (2) neurogenic, (3) infectious, (4) traumatic, (5) dietetic deficiency. From such a classification he and others outlined a therapeutic regimen which, however, is not of much avail when the failures and recurrences are noted. We are all aware that control of the chemical factor of hyperacidity is conducive to healing; maintained neutralization or inhibition is necessary if a recurrence is to be prevented. It is indeed simple for a physician to outline a change of life but the patient leaves the clinic, returns to his environment, and much more is required than clear-cut instructions. It is, indeed, surprising how few individuals can follow instructions. Foci are usually easily eradicated but most frequently the only change this brings about is false dentures for the patient. The increasing recognition of complicating hiatal hernia or ventral hernia is interesting but its correction does not promise relief of ulcer recurrence. Traumatic foodstuffs are easily eliminated to much benefit, but this is not itself adequate, nor is the correction of vitamin deficiency.

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*From the Department of Medicine, School of Medicine, Tulane University.

†From the Department of Gastroenterology, Touro Infirmary, New Orleans.

One new drug after another is offered. Each facilitates control of one or more factors concerned, but none is sufficiently comprehensive to surface the entire defect.

A change of drug, a new method of dietetic management, a different physician, each will bring about a remission in the great majority of cases; this explains why the ulcer patient is such a wanderer. Frankly, to the present time we have only adequate knowledge to let us control acidity and to practice the "art of medicine" in individualizing our patients. The control of the factor, acidity, we feel is paramount to healing of the immediate ulceration, without which we cannot hope for relief, but unfortunately it is this phase which has overshown all other factors in the minds of the majority of clinicians. The latter factor is too little respected by the publisher of statistics; it is the personality of the patient reflected in the title, "inherent constitutional predisposition." In the normal individual who has a peptic ulcer, emotional, domestic, financial, business and social problems interfere with healing and precipitate recurrences. Therefore, the physician must be much a psychiatrist: he must establish the confidence of the patient. he will solve much of his difficulty by listening to the trials and tribulations of a business man, the thwarted ambitions, the domestic and sexual incompatibilities of a housewife. The therapeutic value of such care is inestimable and will do much to increase the percentage of cures and decrease the incidence of recurrence with associated minimization of unnecessary and disastrous surgery.

Further, since it is often difficult to differentiate between a healed ulcer with symptomatology due to an emotional state and an active ulcer with symptoms, an investigation of the emotional life of the individual is indispensable for treatment as well as diagnosis. Davies and Wilson psychologically examined their patients; 84 per cent were precipitated by concern over work, finances or domestic affairs.

The best means to the end in controlling the mental handicap of the patient calls for an initial hospitalization period. This separates the patient from environmental disturbances; physical with mental rest is achieved, physician and patient are in close contact, cöoperation and confidence are established. Hospital routine is ideal for revising the patient's daily schedule, a dietetic regimen is easily organized, bed rest makes dietary restriction a simple matter, tense nerves are relaxed by rest plus sedation, excitation is readily excluded and the patient is made to realize that the ulcer is only a part of the diseased state. Physician and patient have equal opportunity to study the situation and much satisfaction is obtained by this ideal management of the problem; the patient is re-educated, a dietary régime is established and the patient learns to live with his disease. Chappell and his associates have given evening lectures on the worry, expenditure of effort, psychosomatic relation and self assurance; they report favorable results in a controlled series.

The numerous diets with their conflicting rationale are most confusing, yet considering the varied response of these individuals, it is no more surprising than the formidable drug list advocated. The error, we feel, lies in our lack of understanding of the exact mechanism of pain production, the relative importance of acid peptic action and motility in production of symptomatic relief. It is noteworthy that patients with active symptoms may be placed at rest, all nourishment discontinued, only antispasmodics and sedations applied and prompt relief follows. This, of course, raises the question of the actual importance of acid-peptic action in symptom production. It has been a frequent practice of ours to place the uncomplicated case on a starvation régime for 24 to 72 hours, supplemented only by parenteral fluids, sedations and antispasmodics. and despite the presence of unbuffered acid in the stomach symptoms subside. Then milk is given in increasing quantities at frequent intervals from 7 A.M. to 10 P.M. A gradual transition is made to soft, easily digested foods, thus avoiding gastric irritation. Frequency of feedings aids in neutralizing free gastric acidity and, therefore, intermediate feedings are persisted in. We have found it seldom necessary to complicate the picture by various expensive milk powders, etc., which we feel have no proved value.

Experimentally, proteins have greater protective power against the development of gastric lesions than have carbohydrates or fats. This protection is ascribed to the interference of proteins with the proteolytic activity of pepsins, to a retardation of digestive products or to an acid combining power. In mice a protein deficient diet will cause ulcer formation. An interesting bit of work by Goldberger and Wheeler using a pellagra diet on the rationale that pellagra is frequently characterized by hypoacidity or anacidity, afforded no practical knowledge. No change in gastric acidity was achieved; the diet is too trying to be of clinical application.

DRUGS

THE ANTISPASMODIC GROUP: Belladonna and atropine stand out as most satisfactory and are most universally used; their effect on gastric secretory function is well established and it is unfortunate their use cannot be continued indefinitely. To avoid atropinism in the sensitive patient, trasentin and syntropan stand as valuable synthetic drugs, but, as yet, their effect on gastric secretion has not been established. The various barbiturates as sedatives are antispasmodics.

NEUTRALIZERS OF GASTRIC ACIDITY: Absorbable alkaline powders (Sodium bicarbonate, sodium and potassium citrates and acetates) are an adjunct of an early day. Proved alkaline intoxication limited their use and now, in an acceptable régime, only the relatively non-absorbable powders such as the magnesium salts are in use. Alkalis in general are threatened with discard; magnesium phosphates are non-absorbable, acting locally, are excellent, but it is difficult to balance the laxative and constipating effects and yet control the acidity; further, they remove acid chyme and their neutral action stops digestion.

MUCIN recommended by Fogelson in 1932 by virtue of its demulcent properties has beneficial effect and combines with more acid than most proteins. It is expensive and as Rivers has stated is not as efficacious as desired.

HYDROGEN PEROXIDE in sufficient concentration to be a depressant of gastric acidity will cause too much discomfort and may stimulate ulcer hemorrhage.

ALUMINUM HYDROXIDE: The antiacid of the day is the unabsorbable colloidal substance; an amphoteric substance, a gram of which is capable of buffering 35 cc. of tenth normal hydrochloric acid to pH. 4 in two hours. It is astringent, demulcent, gelatinous; its coating effect is proved in its use for mucosal delineation. Adequate investigation, over a period of fifteen years, has established its value; symptomatic relief is achieved in 93 per cent of cases. The pH cannot go beyond neutrality and, thus, digestion is not stopped. Further, its absorptive action on toxins and bacteria is indicated by the good results obtained with its use in intestinal disturbances. It is, therefore, more than an antiacid; it reduces trauma by its protective and demulcent properties, it combats infection by its absorptive action on toxins and bacteria. Toxic affects are disproved, intestinal concretions have been reported only in improperly managed cases; the only objectionable feature is its constipating tendency. Further, continuous neutralization, popularized by Winkelstein, is ably managed with the use of diluted aluminum hydroxide gel given by gastric drip. Drip administration affords the ideal of night and day neutralization. It is our experience that this plan is physiologically ideal but too many of our patients are the typically tense individuals who lack the patience and coöperation to tolerate the indwelling nasal tube regardless as to how attractively it is constructed and distributed by enthusiastic detail men. In the patient whose disposition is acceptable one can achieve a happy result by use of this method.

Colloidal barium sulphate, bismuth silicate, calcium silicate are available but have not had adequate trial yet.

Magnesium trisilicate has been drawing considerable attention recently but despite the excellent reports on its use it is suspected that a secondary acid rebound is to be expected. Studies on its toxicity are not complete.

VITAMINS: While all essential vitamins must be adequate we stress the importance of thiamin chloride and cevitamic acid. Neuritic manifestations of bothersome significance are frequently present in the ulcer patient. Vitamin C is deficient in the acceptable ulcer diet for while the citrus fruits are not offenders according to laboratory studies, clinically, their use is often difficult. This latter vitamin is well cared for in the publications of recent years; it is probably not of specific healing or prophylactic value, yet, it is indicated as a supplement to a deficient diet. Vitamin K is indicated only in the occasional prothrombin deficient incidental to jaundice secondary to duodenitis, pancreatitis or hepatitis.

CHORIONIC GONADOTROPIN: The clinical observation that pregnancy is conducive to ulcer healing is believed to be related to the large amount of antuitrin S in the body at this time and has led to experimental work. Sandweiss and his group in a controlled study found it to have some preventive effect on Mann-Williamson ulcers. It had little effect on cinchophen ulcers in dogs. Therefore, this hormone may be a valuable adjunctive form of ulcer therapy, but caution is indicated in being overly enthusiastic in its endorsement.

POSTERIOR PITUITARY EXTRACT: The use of posterior pituitary preparations in treatment was suggested to Metz and Lackey by the observation of polyuria associated with the ulcer syndrome and following the line of observation of Schondube, Cushing and Drouet. They treated 67 individuals with intranasal posterior pituitary powder alone and gained complete symptomatic relief within twenty-one days. Certain individuals of the pituitary type and intractable cases could well be suitable subjects for the use of this form of therapy.

ESTROGENIC SUBSTANCE: The greater frequency of gastric anacidity in the female and the established fact that gastric acidity is higher in the male than in woman has been the basis of the use of estrogenic hormone in ulcer therapy. From the continent have come numerous inconclusive, uncontrolled studies. Korbsch claimed gastroscopically controlled healing in 4 cases treated; Winkelstein could not evaluate any benefit in good experimentation; Schiff, Felson, et al, in a clinical study, found no appreciable effect on the gastric acidity of man. Sandweiss and his workers used theelin on Mann-Williamson's dogs which proceeded to develop ulcers. Conclusively, there is no basis for the use of estrogenic hormone in treating ulcers unless they are complicating a state of hypo-estrinism.

BILE SALTS have shown in the repetitive experimental confirmation of earlier works by DeBakey to have an influence in preventing jejunal ulcers. Interference with bile flow into the duodenum has caused a high incidence of ulcer formation in animals (Kapsinow, Weiss and Hovster, Berg and Jobling, Bollman and Mann, Blanck).

About 1913 Palfrey presented cases of peptic ulcer with symptomatic response to bile therapy. Emery and Schnilker reported the use of ox bile therapy in 40 cases of ulcer, their conclusions exclude ox bile as a specific cure for the disease but offer it as a useful means of relieving the symptoms in certain patients in whom the use of alkalis is contraindicated.

By the same competent medical contributors succus entericus, duodenal extract (Rivers) and pancreatic juices have shown to have less significance.

PARENTERAL INJECTIONS: The intramuscular and intravenous injections of non-specific proteins and other chemical agents had an early advocate in Holler. Such therapy has largely fallen into disrepute despite numerous preparations enthusiastically offered from time to time. Reports concerning them vary from the sublime to the ridiculous. The use of histidine, based on the experimentation of Weiss and Aoron, to offset the loss of amino-acids, is somewhat confusing and its enthusiasts do not control their work. Further Schmidt has presented a capable study discounting the hypothesis of histidine deficiency. Sandweiss' controlled work on Mann-Williamson's dogs does not favor the use of larostidin, emetine or vaccine; he justifies his statement "parenteral therapy has its chief value as an additional method of treatment" in that 60 per cent of his patients given distilled water were relieved of symptoms. Wilhelmy, Upham and Barowsky support Sandweiss' conclusions.

A lipoprotein and emetine (synodal) has been used intravenously, its action is said to decrease gastric peristalsis, produce gastric hyperemia and to promote healing. All non-specific proteins carry with them the hope of changing the tonus of the vegetative nervous system.

X-RAY, as yet, holds an uncertain position. The recent work of Palmer and Schindler with x-ray therapy in gastritis offers possibilities of controlling the secretory function of the stomach; its action on the gastric mucosa and sympathetic nervous system, however, will require much careful and controlled study before clinical application can be considered.

HISTAMINE has been suggested and there is an occasional clinical report of estimable success. We have been using the preparation tarantil (Winthrop) parenterally and are impressed by its apparent value in controlled cases which had no supplemental managament.

Sufficient time has not elapsed for proper evaluation.

The medical management of hemorrhage is still a controversial matter. We feel conservation is the procedure of choice; definitely so, in the earlier decades of life. In our group of one hundred and thirty cases so handled the mortality was 3.4 per cent, while the surgically treated cases presented a 21.4 per cent mortality. Since the surgical management of ulcers not complicated by hemorrhage carries a higher mortality than does the medical management of this complication we insist on reservation of surgery for exceptional instances.

Initial complete rest, continuous aluminum hydroxide drip, a dietary regimen started when hemorrhage has ceased and sufficient time has elapsed for clot fibrosis, parenteral fluids, plasma and transfusions as liberally as indicated, vitamin C as an adjunct, surgical intervention within 48 hours when indicated, constituted the régime.

Meulengracht's ideas deserve thought and trial but we do not feel that it is physiological and despite his series of 491 cases with only 10 deaths we advocate reservation in loading the stomach of an exsanguinated patient often so shocked that he cannot feed himself.

There is relatively universal agreement as to the indications for surgical intervention. These briefly are: (1) a gastric ulcer not responding to acceptable therapy within thirty days. (2) pyloric obstruction proved not due to merely an acute inflammatory state with edema, (3) repeated hemorrhages, especially in patients over 45 years of age, (4) complicating perforation and so-called subacute penetration, (5) repeated recurrence in an individual who has coöperated and is an economic problem.

Modifications in surgical technique are relatively unimportant. Subtotal gastrectomy has become increasingly popular and justifiably so in that it offers the most satisfactory surgical approach as yet evolved in eradication as far as is possible recurrent ulceration and the distressing complications of other gastric operations.

The success of ulcer surgery frequently depends on detailed attention to the postoperative nutritional needs and awareness of the sensitiveness of the jejunum; finally there is the subsequent management of the patient being mindful that the inherent factor cannot be surgically removed.

In Summary: To "cure" an uncomplicated ulcer under a satisfactory medical régime is possible in 85.5 per cent of cases. To perpetuate that result is the problem and this has been achieved for ten years in 75.5 per cent of cases managed by the régime advocated. It calls for adequate initial therapy as outlined and adherence to instruction on discharge which include (1) a smooth adequate diet, (2) avoidance of alcohol, (3) abstinence from tobacco which is proved to excite gastric secretion acid, hypertension, pylorospasm and vascular spasm, (4) judicious use of acid neutralizers as indicated and antispasmodics as needed (5) most important: continued life in a manner conducive to physical and mental relaxation, (6) periodic examination, constant consideration and observation as closely as is given the diabetic and cardiac.

Conclusion: The problem of ulcer management is still unsolved. No one therapeutic regimen is applicable to all cases, no prophylactic method prevented ulceration artificially produced in dogs; each patient must be individualized and treated according to all the factors related to the case. Recurrence in a properly managed case means: the patient has not coöperated or his constitutional predisposition to peptic ulcer is so great that no form of therapy as yet known to the profession can promise a "cure."

REFERENCES

Adams, W. L., Arch. Int. Med. 63:1030, 1939.
Andresen, A. F. R., Am. J. Digest. Dis. 6:641, 1939.
Ask-Upmark, E., Act med. Scandinav. 103:280. 1940.
Berg, B. N-. & Jobling, J. W., Arch. Surg. 20:997. 1930.
Berg, M., Am. J. Digest. Dis. 7:78, 1940.
Berry, L. H. & Daily, U. G., Am. J. Digest. Dis. 7:63, 1940
Blackford, J. M. & Cole. W. S., Am. J. Digest Dis. 6:637, 1939.
Bloomfield. A. L., Am. J. Digest. Dis. 6:700. 1939.
Boles, R. S., Am. J. Digest. Dis. 6:632, 1939
Bollman. J. L. & Mann. F. C., Arch. Surg. 24:126. 1932.
Brown, H. K., Northrop, N. W. & Mehteny, D., Northwest Med. 39:101, 1940.
Brule, M., Hilleman. P., Gibrin, E. & Callandry, L., Arch d. mal. e'lapp digestif. 29:846. 1939.
Culmer, C. V., Am. J. Digest. Dis. & Nutrit., 4:219. 1937.
Cunha, F., Am. J. Surg. 5:23, 19. 1934.
Davies, D. T. & Wilson, A. T. M., Lancet, 2:723. 1939.
Dennis. C., Ab. J. Physiol. 129:171. 1940.
Dimerleau, J., Arch. D. mal. de l'app digestif. 29:856, 1939.
Eads. J. T., Am. J. Digest. Dis. 7:32, 1940.
Eisele, C. W., Arch. Int. Med. 63:1048, 1939.
Emery, E. S. & Rutherford. R. B., New England J. Med. 222:205, 1940.
Emery, E. S., Jollinger. R. & Rutherford, R. B., Surgery 7:574, 1940.
Emery, E. S. & Schnutker. M. A., Ann. Int. Med., 4:2007. 1938.

Ehrenfield, I., Brown, A. & Sturtevant, M. J. Allergy 10:343, 1939.

Eusterman, G. B. & Morlock, C. G., Am. J. Digest. Dis. 6:647, 1939.

Farbman, A. A., Sandweiss, D. J. & Saltzstein, H. C., Am. J. Digest. Dis. 6:702, 1939.

Finsterer, H. Wien. klin. Wchuschr 52:394, 1939.

Finsterer, H., Wien. Arch. f. inn. Med. 33:296, 1940.

Fogelson, L. J., J.A.M.A., 5:53, 97, 1934.

Graham, J. G., Alexander, J. C. & Kerr, J. D. O., Lancet 2:727, 1939.

Holman, C. W., Arch. Surg. 40:150, (Jan.) 1940.

Horsley, G. W., Virginia M. Monthly 67:29, 1940.

Hunter, W. & Dryerre, H. W., Brit. M. J. 2:15, 1939.

Idem, Arch. Surg. 27:1057, 1934.

Jones, C. R., Jr., Am. J. Digest. Dis. & Nutrit. 5: 499, 1937.

Jones, F. A., Brit. M. J. 1:915, 1939.

Kapsinow, R., Ann. Surg., lxxxiii, 614, 1926.

Keeley, J. L., Ann. J. Surg. 45:85, 1939.

Kirsner, J. B. & Palmer, W. L., Am. J. Digest. Dis. 7:85, 1940.

Knapper, C., Nederl. tijdschr. v. geneesk. 83:2058, 1939.

Komarov, S. A. & Komarov, O., Am. J. Digest. Dis. 7:166, 1940.

Komarov, S. A. & Krueger, L., Am. J. Digest. Dis. 7:190, 1940.

Kretschmer, H. L. & Brown, R. C., JAMA, 113:1471 (Oct. 14) 1939.

Lonphere, G. H., California & West. Med. 52:59, 1940.

Mahle, A. E., J. Ind. S. Med. Assoc., 31:452, 1938.

Mann, F. C. & Williamson, C. S., Ann. Surg. 67:409, 1923.

Mann, F. C., Brit. M. J. 1:707, 1939.

Matzner, M. J., Am. J. Dig. Dis. 5:36, 1938.

McPeak, C. N., Radiology, 34:343, 1940.

Melton, G., Lancet, 1:316, 1940.

Metz, M. H. & Lackey, R. W., Tex. St. J. Med. 34: 214, 1939.

Metz, M. H. & Lackey, R. W., Am. J Digest. Dis. 7:27, 1940.

Meulengracht, E., Brit. M. J. 2:321, 1939.

Meyer, J. & Kasamin, J., Am. J. Dig. Dis. 5:12, 1938.

Nakada, J. R., Rev. Gastroenterol. 6:389, 1939.

Nichol, B. M., Lancet 2:881, 1939.

Palmer, L., Schindler, R., & Templeton, F. E., Am. J. Dig. Dis. 5:501, 1938.

Palmer, W. L., Ann. Int. Med 13:317, 1939.

Palmer, W. L. & Nutter, P. B., Arch. Int. Med. 65:499 (March) 1940.

Penner, A. & Bernheim, A. I., Arch. Path. 28:129 (Aug.) 1939.

Rivers, A. B., Arch. Int. Med. 5:5397, 1934.

Rivers, A. B., Am. J. Digest. Dis. & Nutrit. 3:698, 1936.

Rivers, A B., Am. J. Digest. Dis. & Nutrit. 3:398, 1936.

Sampson, D. & A. & Sosman, M. D., Am. J. Roentgenol. 42:797, 1939.

Sandweiss, D. J.et al, Am. J. Dig. Dis. 5:24, 1938.

Schmidt, E. G., J. Lab. & Clin. Med. 25:512, 1940.

Steigmann, F. & Fantus, B., Am. J. Digest. Dis. 7: 197, 1940.

Steigmann, F., Illinois M. J. 76:443, 1939.

Strengel, A., Jr., & Ravdin, I. S., Surgery, 6:511, 1939.

Walters, W. & Clagett, O. T. Am. J. Surg. 46:83, 1939, ibid, 46:94, 1939.

Warren, H. A., Pijoan, M. & Emery, E. S. Jr., New England J. Med. 220:1061, 1939.

Whitcomb, B. B., J. Connecticutt M. Soc. 3:272, 1939

Woldman, E. E. & Polan, C. G., Am. J. M. Sc. 198: 155, 1939.

Woldman, E. E. & Rowland, V. C., Am. J. Dig. Dis. & Nutrit. 5:2733, 1935-36.

1534 Aline St.

Significance of Upper Gastro-Intestinal Studies*

LUCIAN M. FERRIS, M.D.
VICKSBURG, MISS.

IN GIVING this paper it is hoped light will be thrown on some observations from a study of five hundred gastric analyses done at the Vicksburg Sanitarium over a period of thirty-two months, including other procedures of gastro-intestinal studies carried out with each patient that received a fractional gastric analysis. These latter studies include 338 fluoroscopic and x-ray examinations of the stomach and 240 gallbladder studies. Cases having had x-ray or fluroscopic examinations without gastric analysis are not included in this study.

Our gastric analyses were done by the fractional method—obtaining a fasting specimen of gastric juice and after feeding a test meal of eight arrowroot cookies and 350-400 cc. of water, withdrawing specimens of the stomach contents every fifteen minutes for several hours, and determining in just what period the highest and lowest acid values occurred.

Of the 500 cases studied, 476 were white, 24 colored; 279 females and 221 males. Serological tests for syphilis were obtained in 403 cases, 382 of these being negative and 21 positive. In the 338 fluoroscopic studies, barium was given by mouth, and the esophagus, stomach, and duodenum observed. Of these, 65 or 19.2% were found to have a demonstrable deformity of the duodenal cap and three were found to have gastric ulcer. Only one gastric carcinoma and one carcinoma of the esophagus were seen. Eight cases were suggestive of duodenitis. There were five cases of marked pylorospasm, one of the latter needing dilatation for relief.

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*Read before the Section on Medicine at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 14, 1941.

Oral gallbladder dye was given in 240 cases and followed by x-ray picture of the gallbladder the following morning. In these 240 examinations, 61 or 25.4% were found to have essentially no function.

Out of the 500 fractional analyses there were 69 or 11.2% in which there was no free hydrochloric acid found in the stomach throughout the whole fractional period.

The average age of the entire series of 500 analyses was 44 years. The average of those with duodenal ulcer was 43.6 years, those with diseased gallbladders 49 years and those with complete achlorhydria 51 years.

In the fractional gastric analyses each case was studied as to the time following the test meal in which the free HCl value reached its peak. Practically all tests were carried beyond two and one-half hours and if the acid value remained elevated were carried until a definite reduction was noted. Some tests were continued as long as four hours and fifteen minutes. By taking the number of cases reaching their peak at fifteen minute intervals and recording, one finds a very interesting and instructive graph, by which one may critically compare the merits of a fractional analysis over the one- or two-hour method frequently used. It is noted that only 52 or 10.4% reached their peak of free HCl production within one hour, that 233 or 46.6% were between one and two hours and that 193 or 38.7% were between two and three hours. In only 22 or 4.4% was the peak reached after three hours. We can easily see then that between one and three hours following the test meal 426 or 85.2% reached their peak value, and that if the test had been only taken at the end of one hour, relatively little knowledge would have been obtained.

Although the lack of information obtained from a fasting stomach analysis is generally known, it is interesting to note the results in this study. There was no fasting free HCl in 251 cases, but 182 or 73% of these developed free HCl in the fractional tests, even up to a mean highest value of 30°. This represents a 73% error, had the fasting free HCl value been depended upon.

The 65 cases of duodenal ulcer had a fractional highest free HCl value of 56° as compared to 33.6° for the cases of gallbladder disease, 30.6° for the entire fractional series and the 13.1° for those of the fasting values. Of the 65 duodenal ulcer cases 54 or 83% were males and only 11 or 17% were females. Thirty-one were given gallbladder studies and 14 of these or 45% were found to have gallbladder disease, thus revealing the frequency in which both these upper intestinal disorders occur together.

It was noted in this ulcer group that of the patients complaining of epigastric pain at a certain definite time, 72.7% of them had the pain at approximately the same hour as the highest free HCl values occurred.

Sixty-one or 21% of the 240 gallbladder studies showed very poor or no function at all. Here, as previously referred to, the average age was 51 years and the average free HCl 33.6°; 55.7% were males and 44.3% females. The diagnoses as given in these cases of gallbladder disease were: cholecystitis 57.4%, duodenal ulcer 13%, chronic gastritis 6.6%, cholelithiasis 4.9%, cirrhosis 4.9%, pellagra 3.3%, or a total of 90%, all representing some definite dysfunction relative to the upper gastro-intestinal tract. In only 10% were the diseases unrelated. Symptoms most prominent in these 61 diseased gallbladder cases were in order of frequency, weight loss, vomiting, chronic indigestion, nausea, gas, weakness, epigastric pain, poor appetite, upper abdominal and upper right quadrant discomfort and pain, nervousness, hunger pain, etc., these symptoms being practically identical to the symptoms as given by the cases of the complete achlorhydria group, both in order of frequency and likeness.

In reviewing the 69 cases that had no free HCl throughout the entire fractional period it was found that the stomach contents were normal in odor in 80%, food particles were present in 46%, lactic acid was present in 16% and pus was present in only 19%. One would possibly suspect to find in these achlorhydria cases a frequency of large atonic stomachs and duodenal caps, but in this series a normal stomach as regards tone, position and motility was found in 74% and a normal duodenal cap in 56%. A combined atonic stomach and duodenal cap was noted in only 16%. The gallbladders were studied in 31 of these achlorhydria cases and 45.2% were found diseased. As to the diagnoses made in this achlorhydria group one finds again the inter-relationship of the pathology or dysfunction of the stomach, gallbladder, liver, pancreas, etc. The diagnoses given in this group in which there was a total absence of acid were: chronic gastritis, chronic cholecystitis, vitamin deficiency, cirrhosis, pernicious anemia and pancreatitis.

Conclusion

Five hundred fractional gastric analyses are reported. These included 338 upper gastro-intestinal fluoroscopic x-ray examinations, and 240 gallbladder function tests—none of the two latter being included unless fractional analysis had been made.

Duodenal ulcer and dysfunctioning gallbladders were noted very frequently in those cases where a study was made—19.2% and 25.4% respectively.

Complete achlorhydria was noted in 13.8% of all fractional analyses.

Of those cases of duodenal ulcer in which the gallbladder was studied 45% were found diseased.

Of those cases of complete achlorhydria in which the gallbladder was studied 45.2% were found diseased.

The frequency of concomitant dysfunctions in diseases of the upper gastro-intestinal tract is impressive.

In a fasting stomach free HCl is useless when considered alone.

Finally the great importance of fractional gastric analyses is stressed, especially beyond the one hour period and frequently up to three hours—thus revealing what should be known if a gastric analysis is to be done at all.

DISCUSSION

Dr. F. M. Acree (Greenville): Dr. Ferris' discussion brings out some interesting facts and stresses a very important point, that is. that single gastric analyses are of little or no value. It is also interesting to note that approximately 20% of all the cases studied showed some definite deformity of the duodenal cap and that 25% of the gallbladders studied in connection with this series were malfunctioning.

At the King's Daughters Hospital, Greenville, the routine on fractional test meals is as follows. The patient is not allowed to eat breakfast and is given the Ewald test meal of two pieces of stale bread from which the crust is removed and 500 cc. of water. A small stomach tube is passed and a specimen is taken for the analysis at 20, 40, 60, 90 and 120 minutes. This two-hour period gives sufficient information in the large majority of cases.

It is interesting to note that Dr. Ferris found that the peak of HCl production occurred in 38% of his series beyond the two-hour period. This would suggest that it would be advisable to continue the tests through the third hour. In our work at the King's Daughters Hospital the apex average of normal curve is reached in 60-90 minutes and the decline to within 20-30 degrees of the fasting level in the two hours.

The hyperchlorhydria curve conforms to the normal curve except the acid values are higher. It is not unusual to find a free HCl of 75% or higher. This type of curve may be found in the normal individual but more commonly in cases of early gastric ulcer. In the extra gastric curves, instead of the acid values starting to recede after 60-90 minutes, they continue to rise, the two-hour specimen having the highest acid values. Duodenal ulcer, cholecystitis, appendicitis and sigmoiditis are the more common diseases associated with this curve. The acid values run higher than the normal curve but not so high as in the hyperchlorhydria groups. The average apex is from 55 to 60 degrees of free HCl.

The hypochlorhydria curve may be benign or due to malignancy of the stomach. There may be no free HCl for the entire two-hour period and the total acid is low. If no free HCl is secreted after the Ewald test meal, the test is repeated at another time, but instead of the Ewald meal, 2½ cc. of 1:10,000 solution of histamine is injected subcutaneously. If acid is not produced a true achylia is stated to be present.

Achylia gastrics may be due to some nervous manifestation but in most cases some organic disease as pernicious anemia, vitamin deficiency diseases such as pellagra or the more severe carcinoma of the stomach may be found.

Another test or examination not mentioned by Dr. Ferris that may be of importance and produce information is to give a Ewald test and one hour later remove entire stomach contents. This amount is examined for bile. mucus, pus, and gross blood. The normal amount recovered is usually between 50 and 100 cc. In cases of hypersecretion or defective motility it may be 200 or 300 cc. Very large amounts are indicative of dilatation and suggestive of pyloric stenosis.

Bile may be present in hyperchlorhydria, gallbladder disease, duodenitis, and pyloric stenosis or rigid pylorus from adhesions.

Mucus, if of stomach origin and present in considerable quantity, is indicative of catarrhal inflammation.

Blood, if coffee ground color, is very suggestive of cancer. Bright red blood may be from ulcer or from some injury due to passing the tube.

Pus in small quantities may be present in cases of gastritis. Considerable pus cells are sometimes seen in ulcerating cancer and large gastric ulcers. Large amounts of pus are very rare and would point toward acute or chronic suppuration of the stomach or rupture of large abscess in the stomach.

Dr. G. W. F. Rembert (Jackson): Dr. Ferris' paper is quite worth while, both from a clinical and statistical viewpoint. It shows careful study and his conclusions are good. The collaboration of fluoroscopy and serology with the fractional test-meals carried over several hours makes it possible to arrive at the diagnostic conclusions so well stated by him.

Fractional extractions of gastric test-meals over sufficient periods of time are infinitely better than relying either on single extractions from fasting stomachs or the 1- or 2-hour, or both, extractions, such as suggested by Ewald, Boas and others. Also, 7- and 8-hour, postprandial, meals as outlined by von Leube do not give the information such as can be had from the fractional extractions, at approximately 15-minute intervals, over 2 to 3 or more, if necessary, hours.

Since the advent of the x-ray and its convenient and inexpensive fluoroscopy and with the apparently steadily increasing facility of surgical approach in most upper abdominal conditions showing symptoms there has been, unfortunately, a steadily growing tendency to disregard the possible and even probable diagnostic assistance to be had from gastric test-meal extractions when properly done and this was noted even as far back as 20 years ago by Moynihan and others. This attitude, however, is regrettable for it is definitely possible to learn much by this procedure when properly done and while it is by no means a *sine qua non* as to the exact and total pathology present, whether in the stomach, duodenum, gallbladder, pancreas, or otherwise, yet, the matter of actual gastric retention—absence or presence of free HCl and the degree of same, as well as the approximate amount secreted; the presence, amount and appearance of blood, if any; the nature and amount, if any, of duodenal regurgitation; the possibility of some tissue-fragments from gastric walls—and even pus and bacteria, if present—can often only be shown by the stomach tube and by no other means except surgery. Consequently, it should not be discarded in cases warranting its use but if it is to be of real value then it should be carefully done and enough time given to it to make it worth while and dependable.

In view of the fact that the very presence of normal acid in the stomach is an important factor to be considered in many blood dyscrasias, that it definitely influences nutrition, and that its presence or absence can only be actually determined from properly conducted extractions from the stomach, it makes the examination of stomach contents all the more important.

The use of x-ray, both films and fluoroscope, is today rightfully regarded, where indicated and possible, as one of the essentials in a properly conducted examination but not only is proper technique necessary in the production of same but the interpretation calls for sound and conservative judgment in order to avoid errors. Poorly made radiographs and inexperienced and incapable interpretations can well lead to very serious consequences.

Dr. Ferris very wisely calls attention to the frequent association of two or more pathological states in the organs of digestion and this can almost be regarded as the rule rather than the exception—which is well worth remembering when proper treatment for same is being outlined.

Dr. L. M. Ferris (closing discussion): We have carried out most of the things that Dr. Acree has suggested, but in this paper in reporting 500 cases it was pretty hard to get everything in in 15 minutes' time. As to doing a practical analysis in or out of the hospital, we do that, and after we get a tube down and threaten to have to put it down again the patient is quite willing to stay any length of time necessary in the clinic. In the hospital we have had no trouble at all. Thank you.

The Use of the Peritoneal Fluid in the Treatment of Gangrenous and Perforated Appendices*

OTIS H. BECK, M.D.
Hirsch, Beck and Eubanks Clinic
GREENVILLE, MISS.

FOR A NUMBER of years the pendulum has swung toward a better understanding in medicine. This fact alone has accounted for many advances that have occurred in medicine. You and I should keep our shoulders to the wheel with an open mind to help in the progress that is destined for us.

Bernhard Steinberg, B. H. Burton, S. F. Herman, Coller and Ransom and others from time to time have added to our knowledge in regard to the peritoneal fluid. It is my purpose to discuss some facts that I have obtained from them and have placed in practical use. If I have enough clinical evidence to satisfy you, I shall feel that this paper is justified.

This fluid collected and studied in the proper manner is of immeasurable help in handling one of our most serious problems, the treatment of gangrenous and perforated appendices.

The mortality rate varies from 38% to 5%. The average of fifteen groups reporting, selected from a cross section of the country and including private and charity institutions was 16.6%. These represent groups reporting for 1938, 1939 and 1940. A same group of fifteen reporting from 1931, 1932, and 1933, showed the mortality was 25.2%. This reflects a gradual improvement in the handling of these cases.

This improvement has been due to several things.

(1) The appreciation of the knowledge that precedes us and brought about by the closer unity of the medical profession. Any one can remove a moderate subacute or gangrenous appendix, but when a suppurative or ruptured appendix is encountered it requires the experienced knowledge and ingenuity of an expert, hence cases should be referred earlier.

(2) The crusade against purgation for every abdominal pain has done lots and should be continued. One out of every eleven die who have had a cathartic and purging prior to operative interference. On the other hand only one dies out of 96 if purgation is not practiced. It is up to the doctors to sell the public against this thing. Do you realize that the drug store men treat a great deal more of the ordinary pains in the abdomen than we doctors?

(3) A closer coöperation between the surgeon and the pathologist. This information obtained has led men to dive into hidden problems and work them out. The pathologist has taught us how important it is to determine the type of appendicitis that we are dealing with. No more glaring example of this is noted than in gangrenous appendicitis in which amebiosis is the causative factor. When noted and properly treated, the convalescence is of no significance; but unrecognized becomes the bad luck cases, the cause of multiple abscesses, wound infections, fecal fistulae, ileac and subdiaphragmatic abscesses, and oftentimes death.

We, in the South, see this quite frequently. Let me stress that with the diagnosis made at the time of procedure, emetine hydrochloride is a marvelous drug and when given promptly prevents any of the above complications. I have given as high as three grains a day in severe cases without any bad results.

The most frequent causes of appendicitis that become gangrenous and suppurative should be discussed now: (a) staphylococci, (b) streptococci, (c) colon bacilli, (d) amebiasis, (e) tuberculosis and many combinations of the above super-imposed upon the other. All these things can be determined by the pathologist at the time of the operative procedure or within 24 or 36 hours of the convalescence. This gives one ample time to decide upon the type of treatment desired. I want next to call your attention to the part that stricture plays in producing the gangrenous and ruptured appendices. This fact is well known and recognized and the suggestion is, that in making x-ray pictures of the gastrointestinal tract that this be remembered. The hazard of leaving this type of appendix certainly deserves an operative procedure. The many prophylactic procedures done while a laparotomy is in progress has done a great deal in lowering the possibility of a ruptured appendix. It is well to stress the type of organism present as it may change the form of treatment. Thus this is a very important piece of information that every surgeon should have. This can be done by the initial slide at the time of operative procedure and cultures made. After the initial slide is reported, active treatment may be begun at once. I have had two cases who were diagnosed in this manner and treatment instituted thus preventing complications. Without this information I doubt seriously that either would have had the beautiful convalescence that each had following the removal of gangrenous appendices in which amebiasis was responsible.

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*Read before the Section on Surgery at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 15, 1941.

In June of 1938 Steinberg and others after experimenting with dogs, rabbits and guinea pigs, and injecting cultures of different bacteria intraperitoneally had this to say:

"It is significant irrespective of the animal species the first overwhelmingly predominant cells were consistently the polymorphonuclear. In previous experiments it was shown that the outcome in a massive peritoneal infection is decided in the first eight to twelve hours after the bacterial invasion.

"In the light of the former experiments it may be assumed that the polymorphonuclear is the only phagocytic cell responsible for the removal of microörganisms, and that the polymorphonuclear is the essential cell in the local struggle of an acute inflammatory process due to bacterial invasion."

At this particular time I want to bring to your attention this information that there are two distinct groups of cases, those to drain and those not to drain. The particular things that brought this question foremost in my mind was that 32% of those who were drained had complications, and those whom I did not drain were less than 1%. It is, therefore, a distinct advantage not to drain, and it is my purpose to determine a sure way of whether a case can be closed safely or not. The following is given to you as information only.

There is a fluid that is associated with all cases that have an infectious process. This is a sero-lymphatic fluid, there being two types encountered in the inflamed abdomen, one a very defensive fluid and the other an offensive fluid. The secret is to determine which fluid is defensive in character. This fluid for a long time was passed up without much work or comment; however, in late years a number of men have taken the attitude that the fluid is a defensive fluid prepared by the body to fight the infection or irritant that might be there. This fluid only becomes offensive when deranged or hindered in its normal development.

There are other peritoneal fluids but none has the characteristics that this fluid exhibits. This fluid is made up of fibrin, polynuclear cells, small lymphocytes and water. It is very liquid at first and is a product of the lymph system. The cellular reactions seem to depend upon the severity of the infection and body resistant to the invading irritant. The amount of fluid depends upon the body needs. As dehydration of this fluid occurs, a net surrounds the irritant area walling this area off. This picture I have followed under the microscope. The fibrin fibers that are arranged like a fishing net having at each knot a polymorphonuclear leucocyte. In this manner the body walls off and protects the absorption and spread of the toxic and invading organisms. Certainly this demonstrates that the fluid throughout is a defensive fluid and will become offensive when tampered with. In advanced cases the invading irritant kills and destroys the mechanism in which it works. It has also been my observation that in the beginning and up until the time when the walling off process has failed, that this fluid has two cellular reactions. In one fluid the small mononuclear lymphocytes may predominate, if so, all cases can be closed without any further debating.

There are fluids in which the polymorphonuclear cells predominate, if so, the body defensives are being called on to combat a serious irritant. Therefore, it is in these fluids that much care must be taken in whether to drain or not to drain. It is also my observation that the more favorable reactions occur in the polymorphic stage, that any fluid in the polymorphic reactions is safe to leave as it will handle the invading organism. However, when the body loses the polymorphic reaction it is then that you see necrosis and degeneration showing in the fluid. On occasions a bloody fluid is found. These fluids show about the same picture and are probably hemorrhagic. In operating these cases it, therefore, holds that the less manipulation and handling of the tissues in these cases is an important factor. Would you sponge away the body's protective fluid and invite the increased activity of invading organisms? This fluid can be collected at the time of operation with a sterile medicine dropper and a report made by the pathologist before closing.

There was one thing that was noted in all cases where the appendicitis was of the appendicular wall, the polymorphic response was there, whereas in cases where the appendicitis was of the lumen there was a definite trend toward a lymphatic response. There are cases where these occurrences are combined. This picture is not fully understood and will not be discussed as yet. I expect that the reason men of today are willing to postpone operative procedure until dehydration, hypochlorization and ketosis can be controlled is to allow this abdominal fluid to become more active, forming fibrin plagues, walling off and preventing absorption. Certainly the success of the delayed treatment is based upon the action of this abdominal fluid.

There has been much said and much work done on the delayed or expected treatment of the perforated appendix. I know that it has caused a number of practitioners to allow a patient to remain at home before referring for an operative procedure. One case in particular that was diagnosed as ruptured appendix and treated conservatively was a case of ruptured duodenal ulcer.

Those who believe in the delayed treatment of appendicitis base their judgment upon the opportunity of the body defenses against the infection to develop to such an extent that this body mechanism will overthrow and control the invading organs.

In reviewing the literature I find that numerous authors refer to the complications of delayed treatment—numerous appendiceal abscesses, subdiaphragmatic abscesses, abscess of cul-de-sac, and numerous others depending upon the position and plane in which the appendix lies. They disregard one of the fundamental principles of handling appendictis: this is the elimination of the source of infection. How much better can the body take care of the pathologic condition with the source of the infection removed! It allows the body mechanism much more latitude in performing its duty of repair.

One other fact that seems important to me is that your patient still has the same old appendix, and certainly needs an operative procedure. Statistics show that only 30% of these submit to an operative procedure after the conservative treatment.

I wish now to report two cases having the same pathological reports, one treated by closing, and the other treated with drains. The first demonstrates the safety in examining the peritoneal fluid, although in the face of a ruptured appendix with a colon bacillus peritonitis.

The case is G. West, case history No. 35811, age 18, male, who was admitted to the hospital. Chief complaint was pain in right, lower quadrant and general malaise, vomiting. Clinical history: Patient developed acute pain in abdomen last Friday. Pains were so severe at that time that patient called a doctor and a hypodermic was given and a diagnosis of appendicitis was made. Ice caps and routine appendical care was undergone by the patient. Sunday the pain became aggravated, apparently localized more in the right lower quadrant over the appendiceal area.

Sunday night nausea had developed with the tenderness becoming more generalized over the lower abdomen. Monday morning patient was very tender over the appendiceal area, so much so that bedclothes could be placed over the patient's abdomen. He was brought into the clinic for a definite diagnosis which was made and the patient instructed to come at once to the hospital. There was generalized tenderness over the abdomen, very little tenderness on the left side. However, there was acute tenderness over the appendiceal area where there was a definite mass that could be palpated and that was very tender; deep pressure over this mass produced nausea. The entire abdomen was slightly distended. The right kidney fossa was also tender with considerable rigidity over the appendiceal area.

The anesthesia was ethylene gas. The incision was a typical McBurney, and on opening the peritoneum there was considerable fluid present. With sterile medicine dropper this fluid was collected and turned over to the nurse for an immediate report from the laboratory. While this was being done the appendix was delivered, very large, endematous, covered with white exudate having near the tip a very gangrenous area from which pus was oozing. Caution was observed with as little handling or manipulation of the bowel or other organs as possible, never using packs or putting anything inside the abdominal cavity. Enough of the colon was pulled out to plug the abdominal hole and allow free access to the diseased appendix. The report at this time was delivered, 95% polys with three plus fibrin which was evidence of a very acute polymorphic fluid. It was here that the decision was made that no drain should be used.

To prevent appendicular phlebitis, the ileocecal vein was ligated as high up as possible. I think this procedure is a very important one as this route is responsible for the transmission of all blood borne complications. We try to ligate as high as possible outside the edematous tissues; it is not necessary to go to the extreme in this matter. Usually the omental length will allow free access and easy ligation. Since doing this procedure I have not had the liver chills on the third or fourth days which are rather troublesome and increase one's concern in a very sick patient.

The next stage is ligation and inversion of the appendiceal stump. Dr. Horsely said, "Burying the stump of the appendix creates a cavity in which the necrotic material, the stump of the appendix and foreign body, the ligature, are enclosed, and the purse string suture which buries the stump cuts off some of the blood supply." He advocates that no crushing should be done. He says, "For a long time I have been in season and out of season advising against the burying of the stump of the appendix, it strikes me as being wholly illogic and a dangerous procedure."

To this I cannot fully ascribe. I do not believe that to leave some of the infection process in the abdominal cavity is a very good procedure. There is a slough beyond the suture. Is it not better that this slough should occur inward into the bowel rather than in the diseased area? I believe it is better where a good inversion can be done after phenolizing the stump and burying it, the first venous process of the omentum brought up and tied over the inversion stump. Certainly this to me seems to be the best procedure. It is also important that the more nearly normal that one can return the ileo-cecal angle into the peritoneal cavity, the greater the chance of returning to a normal convalescence. After the bowel is returned to the abdominal cavity the peritoneum is closed without drainage. The wound is closed, having only a slight rubber tissue drain between the skin border.

The temperature of this patient on admission to the hospital was 102 degrees, went to 103 degrees on the third day and returned to normal on the night of the third, and remained there for the remaining days in the in the hospital. The wound was dressed on the fourth day and was healed by first intention. The rubber drain was removed, all but one suture was removed on the following day. The fifth day the patient was allowed to get up. Ten days later he returned to his work and has felt fine ever since.

The second case that was drained was D. V., No. 9 A.G.E., age 39, who was brought into the clinic in an open truck, having traveled about thirty miles. Six days previously when he was picking cotton a pain developed in the lower abdomen. This he thought was cramps. The pain became so severe that he was taken to his home. The pain did not subside that night. He was given a large dose of Epsom salts, five hours later his bowels moved and the pain was considerably better. However, by the next morning the pain had returned and had grown progressively worse. On the third day his abdomen began to swell. At this time a doctor was called who made a diagnosis of locked bowel or intestinal obstruction. He suggested that enemas should be given and turpentine stupes be used on his abdomen. At this time the patient said he received a hypodermic which eased him for a time. However, two days later they decided to bring the patient to see me. The patient was acutely ill, abdomen distended with a complaint of pain in the right lower quadrant, nausea and vomiting and chills and fever. His temperature was 102 degrees. The total white count was 18,000 with 16% polymorphonuclear cells. The patient upon physical examination presented the usual clinical picture of a ruptured appendix and generalized peritonitis. He was immediately taken to the hospital where under spinal anesthesia the abdomen was opened by McBurney's incision, fluid was obtained and a laboratory report was requested. A rather long, large appendix that was strictured near the middle was delivered. The distal part of the appendix was very large with edematous areas extending to the bowel wall and ileum. The gangrenous tip had a small opening near the omental border from which free pus was recovered. All this time the peritoneal fluid report was 93 polys and 6% small lymphocytes with one large mononuclear.

The Polymorphic Response.—The laboratory reported a colon bacillus present in this fluid which was rather hemorrhagic and contained large flakes. Enough of the bowel was pulled outside the abdominal wall to plug the opening there. After this a slight Trendelenburg position was ordered. Again the ileocecal vein was ligated as high as possible. The omentum in this case was greatly swollen and seemed to enter into the gangrenous process near the tip, making it rather hard to ligate high. However, the inversion was done and the bowel dropped back into the abdominal cavity.

Two small cigarette drains were placed in the appendiceal area.

The patient had a rather septic type of fever. On admission to the hospital his temperature was 102 degrees and following the operative procedures rose to 103 degrees, remaining there for seven days. In this case smears were taken of the peritoneal fluid for three days. The first two days the count remained the same there being very little discharge and apparently the case was progressing very nicely. However, on the third day the fluid turned to a phagocytic and necrotic fluid. Following this a discharge began and continued until the eighteenth day when there was very little discharge. The wound was granulating nicely. It was decided to allow the patient to be up. As no effort was made to close the wound, it was left open. The granulation seemed to be healthy and filling up nicely. During this time the patient had lost considerable weight, however, dehydration had not occurred, as he was given numerous glucose and saline injections intravenously.

On the twenty-first day the patient complained of pain in the lower right quadrant and had a rise of temperature. A hemostat was used to open the wound and a large quantity of pus was evacuated. After seven more days the patient's temperature went to normal and on the tenth day the drainage had subsided. By this time the wound had grown smaller and skin began to bridge over it at each end. He was again allowed to be up. He was given iron and tonics to build up his lost strength. After two more weeks the patient developed pain in the wound. The wound was opened and another pus pocket drained.

This cleared up in six days. After this the patient was advised to go to bed and rest for two weeks. From this period on he made an uneventful recovery. In other words after seventy-seven days when the drainage was used, the patient healed.

A short synopsis of the third case. Mrs. B. R., 25 years, case no. 37342. She was admitted giving the usual picture, pain in R. L. Q.. nausea and vomiting with considerable swelling and distention of the abdomen. The illness began five days ago with pain around the umbilicus. The usual treatment of ice cap and liquid diet followed; however, three days later the pain returned much more severe and localized over McBurney's area. The pain grew progressively worse. Last night pain eased up and swelling of abdomen began. This morning the distention is severe, no food or water has been taken since last evening. General condition is acute.

The examination revealed an acutely ill patient, temperature 104, white blood count was 18,800 with a pulse of 110, the abdomen was distended throughout. There was tenderness and rigidity over McBurney's area. There was outlined a mass there apparently extending into pelvis. The vaginal examination revealed a very tender right side. The diagnosis was gangrenous appendicitis with possible perforation.

The anesthesia was ethylene. The incision was a McBurney's. The abdomen was opened and there was a large amount of fluid rather thick, and about the color of ordinary pus, from which samples were taken. The appendix was delivered, a rather large edematous appendix, the distal two-thirds having increased in size several times with an area of discoloration and necrosis near its end. The omentum was very thick and edematous for two or three cm. The usual procedure was followed, high ligation of ileocecal vein with inversion of the stamp. At this time the pathologist reported the fluid to be 96% polymorphmuclear cells with 4% small, while a few bacteria were seen five to six per field. The abdomen was closed without drainage. The patient was returned to the ward. The temperature was 104 degrees and remained there for the next twenty-four hours then dropped to 102 and remained there for the sixteen hours. Following this there was a general decline until 12 A.M. On the fourth day the temperature reached normal and remained there throughout her period in the hospital. The culture of the case revealed a streptococcus and an occasional staphylococcus indicating that peritonitis was present. However, the polymorphic reaction was present without any signs of degeneration. The patient healed without an ycomplications, thus indicating that all polymorphic fluids without degenerative changes are safe to leave without a drain.

This patient was discharged on the eighth day without wound infection. This type of case drained where streptococcus and staphylococcus are the infecting organisms are responsible for the bad wound infection even extending into the abdominal wall. The test is simple and easily made. I hope that I have stimulated you enough to help work out this problem.

Out of 250 cases of all types of appendicitis, 127 cases presented fluid, only 2 cases presented phagocytic fluids, all other small mononuclear and polymorphnuclear fluids.

The total white count of 127 cases did not coincide with the count in the peritoneal fluid. One case had a count of 7,000 polys which had a bad gangrenous appendix and had a very active polymorphic fluid.

There are those so expert that they can tell by sight what kind of fluid is present. Others can learn much by studying these fluids with a microscope.

REFERCENCES

"Cause of Death in Acute Diffuse Appendicitis," Archives of Surgery, July, 1931, by Dr. Bernhard Steinberg.

"Inflammation of Serous Surfaces," Archives of Pathology, June, 1938.

DISCUSSION

DR. J. GOULD GARDNER (Columbia): Dr. Beck has given us something to think about for there are approximately 300,000 persons in the United States operated on annually for acute appendicitis, and its complications. Twenty thousand of these die at an average age of 27 years; fewer than 2000 die of acute appendicitis. More than 17,000 die of peritonitis.

Of 300,000 persons operated on, nearly 195,000 will have an intact appendix the serous coat unruptured. The mortality will be less than one per cent. Of the 300,000, it is estimated that 105,000 will have peritonitis at the time of their admission to the hospital, and approximately one of every six will die; 63,000 will have local peritonitis, and three per cent, or one in thirty, will die; 42,000 will have spreading peritonitis, and more than 15,000, or one in every three will die. Over 80 per cent of those who die will die of spreading peritonitis.

Fifty-six years ago Fitz described acute appendicitis. During these five decades, thousands of articles have been written about it; eminent men who are relied on for accurate statements regarding the mortality of the disease have used the term acute appendicitis, but there is practically no mortality from acute appendicitis. One in 183 dies. Patients die of peritonitis, not appendicitis. Physicians know that the mortality rate of acute appendicitis reported throughout the United States is anything from zero to five per cent. Do they know that the gross mortality of spreading peritonitis is from 27 to 50 per cent? Still, it is significant that during the past 50 years the number of articles on acute appendicitis published in reputable medical and surgical journals in the United States exceeded the number on spreading peritonitis by 500 per cent.

Dr. Beck recommends the McBurney approach in this, I believe, and most of us concur. This approach is nearest the central zone where part, or all, of the perforated appendix is found, partially or completely covered by omentum, or fibrinous, or fibrino-purulent exudate; in the middle zone, the cæcum and adjacent loops of ileum and omentum approximated and partially covered with plastic exudate, are found; and in the peripheral zone the changes are indeterminate. The central zone and part of the middle zone are visible. The peripheral zone should not be seen, and should not be invaded; for what happens to the patient is determined there in the front line trenches, the operating room.

The author has suggested the examination of the sero-lymphatic fluid for the polymorphonuclear and lymphocytic reaction. This may be a step in the right direction. Unfortunately, I am not familiar with this particular technique. We do make smears or cultures on all of the cases, but do not do differential counts on the fluid. I would like to ask Dr. Beck if this increase in the number of polymorphonuclear cells and decrease in the number of lymphocytes, or an increase in the lymphocytes with a decrease in the polymorphonuclear cells could not be determined before operation by a Schilling's estimation of the shift to the left, or to the right? Finally, we all know in some cases of small children that the physical examination and laboratory findings are deceptive in that signs and symptoms are diminished. I would like to hear from Dr. Beck what his experience has shown with children.

DR. BECK (closing): In response to Dr. Gardner's request about the Schilling procedure and the polymorphic reaction, we have run considerable tests on that thing and the cases that had a polyglot blood count of 7,000 and had a perforated appendix, had a total count of 18,000 and a pure polymorphic reaction. In children the thing works exactly like it does in older people. There are quite a number but we do not see quite as many of the polymorphic reactions in children as we do in the older type of patients—the muscular response is more prevalent there. The fluid is taken immediately after the abdomen is opened, and the pathologist or technician does the laboratory examination and reflects the result to you by the time you get through your operative procedure.

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A barbesheele is the fellow who knows all about you and likes you still.

Dr. A. F. Cooper, the efficient secretary of the Mid-South, adds Dr. J. A. Key, of St. Louis, on orthopedics and Dr. W. H. Cole, of Chicago, on surgery since our last issue. The prospect for a fine meeting next February is very bright. Keep it in mind by marking it on your medical calendar.

Dr. Banks, of Philadelphia, has some interesting ideas on birthdays. It does look like a fellow should be allowed to have them when he wants them and leave them off when he wishes. Dr. Crile, of Cleveland, says that we no longer determine age by years. So maybe there will be something done about birthdays, Dr. Banks.

You will please note the advertisement of First Chemical Company of Texas in this issue. We appreciate this company taking space with us. The Lone Star state is a big one and it believes in doing things in a big way and having the best, so we feel sure this company has the spirit of Texas.

Everything else being equal we will thank you very much to trade with our advertisers. They help us to give you a better journal. It does not cost you anything to trade with them and it helps us a lot.

MEDICAL DEFENSE

President Roosevelt has formed a new division in the office of production management, in order to give small factories an opportunity to coöperate in defense production. This is as it should be. This is a step in decentralization of industry. Mass production concentrated in big centers is very poor economy in its final analysis. Labor troubles are troubles multiplied in the big factories. Production output is decreased and the finished product is very likely decreased in quality. What is true in industry is very true in the medical profession. The concentration of doctors in the big cities is very expensive to the people and in a large measure responsible for our medical unrest. While our cities run about one doctor to four or five hundred people, many sections in the South have only one physician to four or five thousand people. Proportionately, the people in the rural communities and small towns in the South are producing double the man power of the East. In a democracy every person should have an equal opportunity in education and in health. Industry should be brought out to the blacksmith shop that should be on every farm. Likewise, the best there is in medicines should be made available for every family in this country. The power of the nation is in the health of the people. No state in the Union as far as we know has made as much real medical progress as has Mississippi with her very fine public health system, her community hospitals with a per capita distribution of funds for the indigent sick, and her plan of postgraduate courses carried out to the busy practitioner. These extension courses are really a very beneficial interchange of education between the practitioner and the specialist. A good plan in civil life, it will prove even more beneficial in time of war. In medicine in Mississippi we have the plan in a large measure now advocated by the President in general defense.

MALARIA

The second World War is on and it may reach to every community on this little terrestial ball before it is over. Billions of dollars are being spent for machinery to kill human beings. The human brain is being put to it to find new and more effective means to do the job. But according to the latest figures published in recent books, all these new methods with all their billions behind them have not reached the combined efficiency of the malaria parasite. It is estimated that the death toll from malaria the world over is still three and a half million human lives. In America forty-five thousand die of it annually and nine million are infected. Our own Southland has a death rate of three thousand per year. It is estimated that the disease costs our nation five hundred million dollars each year.

The South is really the democratic arsenal of the world. In statecraft, religion, science and in potential manpower it is exceedingly rich. But malaria is a millstone about its neck that must be removed. We know the offending parasite and the mosquito that carries it from one person to another. We know the specific. Yet it takes its heavy toll in human life, in disability, and in money cost. The challenge comes in the application—a big enough job for an "all out" effort on the part of the government and the medical profession. But the government is not intensely interested in the problem. It has done some very effective work in prevention through the WPA, but there still prevails a vague notion that night air causes the disease and that after all there is not so much difference in the man who rubs his back for treatment and the trained medical scientist who knows the mode of transmission and the means of treatment. Even the average doctor does not take any special scientific interest in helping to solve the problem of malaria. Treating malaria is too much like washing and ironing for a living by the poorer classes—it is somewhat looked down on. To have real standing in the profession in which one is engaged one must be able to diagnose and operate on an aneurysm of the circle of Willis and be thoroughly familiar with the Twort-d' Herelle phenomenon. The medical profession of course should have a vision of malaria as a world problem in health and economy. The average practitioner should receive due credit for the application of the known means of prevention and treatment. Our statesmen, or even our politicians, should be enough interested in this human problem and others to add a secretary of health to the President's cabinet.

Due, possibly, to the excessive heat that has prevailed for a long time I have been quite depressed. Consequently I have not attempted to develop any thoughts that might be of special benefit to the readers of the coming edition of Mississippi Doctor. So I shall not intrude any of my cogitations upon these readers this month. However I am hoping that by the time this issue shall reach your desks, I shall have had the great pleasure of grasping the hands of many of you at the September meeting of the Thirteen Counties Society at Aberdeen, September 9. If this meeting does not prove interesting to all who may honor us with their attendance, we, of Monroe County, will be sorely disappointed.

In the past I have frequently tried to pay tribute to the memory of my doctor friends who may have slipped away from the haunts of men. I frequently think, how much better it would be if we should express our love and esteem for our friends while they are alive and capable of understanding how much they are appreciated by those with whom they work and associate. So I shall take "time by the forelock" and speak of the merits and nobleness of character of one whom we all know and admire. I refer to Dr. M. Q. Ewing who has been a victim (may we hope the beneficiary) of surgery in the recent past. He has spent the last month in a hospital in a nearby city. He is still away from home and away from his large surgical practise. He probably, will not be able for another week or more to return to work and to his many friends. He has been sorely missed and, if possible, will be more highly appreciated because of this enforced "vacation." Dr. Ewing came to us about twenty years ago, fresh from school and hospital service. I recognized his brilliancy and scholarship at once and foresaw success for him, with one proviso —the developement of a mature judgment. He, like so many young men (perhaps all of them), felt (or seemed to feel) that he was a super-surgeon and was destined to eclipse all contemporaries. His learning was unquestionable—his self-confidence was colossal and his technique was well-nigh perfect. He would undertake anything and promise (sometimes) the impossible. His work grew by leaps and bounds and his results were unusually good. But he had the ordinary quota of failures. Months and years went by and Dr. Ewing, naturally, a quick thinker, became a safe, sane and sober thinker. And now, at midlife, he is, perhaps, one of the best surgeons to be found anywhere. I am predicting that he will grow better and safer as time goes on; for he has learned (and will still learn) much from his failures. Dr. Ewing is not only a good surgeon but he is an estimable man—a representative and progressive citizen. He is a true and dependable friend. My wish is that he may "live long and prosper" and may "his tribe increase"; for there is dire need for his kind in this troublous and uncertain age.

G. S. B.

Military Section

Office Of The Camp Surgeon, Camp Shelby, Mississippi

SELECTION OF MEAT PRODUCTS

1. The following information on meat and meat food products, is published for the purpose of disseminating pertinent information among those concerned, on this most important subject. Through the improper handling of these products, large units of men may be rendered suddenly unfit for duty when most needed, not to mention the deleterious effects of food poisoning upon the individual. Especially during the summer months in this clime meat and meat food products are more difficult to keep fit for human consumption. It is desired that the attention of all concerned with the handling and preparation of these perishable articles be specifically directed to this communication and that they thoroughly understand it.

a. Under the general class of meat and meat products are included all items of the ration derived either wholly or in a part from recognized food animals. Specifically these articles are meats, both fresh and frozen, such as beef, veal, pork, lamb, and mutton; fowl, under which general term are included chickens, ducks, geese, turkeys, etc.; all varieties of edible fish; lard or lard substitute; dairy products, as fresh milk and cream, ice cream, butter, and cheeses of all types; and eggs.

b. According to army regulations all subsistence items are purchased by the Quartermaster Corps of the Army, under contract with civilian agencies or firms. Invitations for bids on various items are sent to all approved firms and on the date announced on this invitation, bids are opened and contracts awarded to the lowest bidders. However, price is not the prime consideration in buying food for army messes. As an example, the price paid for beef during the month of May at this camp, was .2542 per pound, although sound and edible beef could have been obtained at approximately on half that figure. But such meat would lack the quality demanded by FS PP-B-221, and would be relatively tasteless and deficient in nutritive value.

c. All meats and food products are purchased only from firms approved by the Bureau of Animal Industry, a branch of the U. S. Department of Agriculture.

d. Inspection begins with the arrival of animals at the packing plant. The same attention is given a single animal delivered by a local farmer as is given to a solid trainload shipped from a more distant point. Vehicles in which animals are received are inspected for sanitary condition and evidence of diseased animals. After unloading, animals are examined and all those judged unfit for slaughter for human food are rejected and separated from acceptable individuals.

e. All establishments must conform to strict and well defined requirements as to suitability and cleanliness of premises, (i.e.

yards, pens, prevention of nuisances etc.), interior construction of buildings, with special attention to proper methods of waste disposal and maintenance of cleanliness throughout all operations, water supply, equipment and utensils, cleanliness and disinfection, protection from contamination by condemned carcasses or parts, proper disposal of by-products, tankage, etc., refrigeration, handling packaging and transportation, storage and issue rooms, as well as other points too numerous to consider in detail. In the post-mortem inspection carcasses are carefully inspected for indications of disease. Any cut of meat from a carcass bearing the circular stamp, with the legend "US Inspd and Passed", may be accepted without hesitation, as being safe for human consumption when it left the place of origin. Army specifications require that meat and meat food products be purchased only from firms under the supervision of the Bureau of Animal Industry.

f. The United States Federal Meat Insection Service is universally recognized as the finest and most efficient in the world. It is carried out by approximately 850 veterinary inspectors, qualified under the Federal Civil Service, in 646 establishments scattered through 242 cities and to towns in the United States. During the year of 1939, over 71,000-000 food animals were slaughtered under BAI supervision, of which 228,542 carcasses were wholly condemned, and parts of 763,020 carcasses were rejected. In addition, 986,150 beef livers and 41,239 calf livers were condemned and destroyed for various conditions rendering them unfit for food. However, this amount is only 65% of the total animals slaughtered during the year, the remaining 35% having been slaughtered and processed under no sanitary supervision whatsoever, or under the dubious inspection service of states or municipalities.

g. The meat inspection service of the Army is the responsibility of and is performed by the Veterinary Corps, under supervision of the Surgeon, as senior representative of the Medical Department. This phase of Veterinary activities, dealing as it does, with the health of a command, is a direct extension of the sanitary service of the Medical Department.

The efficiency of the meat and dairy inspection service of the army, may be judged by the fact that in World War I although the quantities involved were tremendously increased, no repetition of the notorious "embalmed beef" scandals of Spanish-American days occurred. Neither has any known instance occurred of any serious outbreak of food poisoning or infection with milk-borne diseases, resulting from failure to detect harmful or dangerous conditions, during inspections at receipt or issue since the Medical Department of the Army, through the Veterinary Corps, has been charged with this important duty.

The veterinary inspection services designed to insure the receipt, by the consumer, of a pure and wholesome product cost the Government of the United States and the packing industry combined, several million dollars per year. The expenditure of this large amount of money, as well as the conscientious labor and unremitting vigilance of the individual inspectors, may be completely nullified by one moment's carelessness in handling products after or during issue.

Under field service conditions, proper handling of perishables is not as so frequently stated, impossible—it is merely more difficult, and requires close supervision by unit surgeons, and coöperation with the commanding officers concerned, to the end that all food handlers be taught the necessity for observing the rudiments of cleanliness.

Meat and meat products are highly susceptible to the deleterious effects of various contaminating agents, furnishing a rich culture medium for the propagation of most organisms and development of toxins. It is of no value to insure the sanitary handling of meats up to the time of delivery, if such products are to be thrown carelessly around on a dirty floor or truck bed, exposed to flies and wind borne filth, or unprotected from rises in temperature with consequent decomposition. Another source of danger from which meat must be protected in actual warfare, is contamination by chemical agents.

Packaged items should be handled on receipt and issue to units so that the original package is unbroken. When necessary to break down into quantities smaller than the original package, protection from contamination should be provided by means of heavy paper or clean sacks, such as bed sacks, or mattress covers. Beef quarters and veal sides are received wrapped in stockingette and burlap, but this covering can not be considered adequate protection, as it must be cut open in the performance of inspection at receipt.

Perishable items subsequent to receipt by organization or unit messes, must be kept under refrigeration until cooked. The quicker meat can be cooked after receipt, the safer it will be for food, but it should not be allowed to remain in the broth in which cooked, as this broth sours readily after cooling and may be the source of a dangerous intoxication. The exigencies of actual field service, as in maneuvers, may not always permit this procedure to be followed. When impossible to cook promptly, meat should be placed under refrigeration. The practice of placing pieces of meat in GI cans in direct contact with ice is to be condemned. The water from melting ice and juices extracted from defrosting meat, sour very readily, and the meat so treated will be unfit for use. Frozen meats should be placed on racks so that moisture resulting from the thawing process may drain away the meat.

Defrosting of frozen meats and fish should be accomplished by exposure to room temperature, or if time permits, allowed to defrost in the refrigerator. Under no circumstances should the product be placed in hot or cool water to hasten the process, as this serves to extract valuable food elements from the meat, which are lost to the consumer. In the case of poultry defrosted in this fashion, every bird is contaminated by fecal matter washed out of the vents and distributed uniformly throughout the water, forming a filthy, unhygienic, and highly dangerous mess.

Butter and eggs, being items which readily absorb foreign odors and flavors, should be protected from such at all times. It is not at all uncommon to find butter in company iceboxes, in close contact with cheese, cut onions or similar highly flavored or scented articles. The men fed by that mess then complain, and rightfully, that the butter tastes like cheese, or onions, or whatever the contaminating agent may have been; or more simply, that the butter is "rotten" or "tainted."

In conclusion, it is emphasized that every attempt, involving the expenditure of large sums of money, is made to insure a safe and wholesome meat supply, and dairy products made from milk from healthy herds, so handled as to meet the stringent requirements of the U. S. Public Health Milk Ordinance and Code. It is the duty of each unit surgeon to see that the objectives of these inspections and sanitary regulations are not defeated by the carelessness, ignorance, or neglect, on the part of members of their respective units engaged in the receipt, issue and preparation of food. In performing this duty, it must always be borne in mind that the welfare of the individual is subordinate to the military situation.

Herbert M. Cox
Major V. C.
Camp Veterinarian.

News and Comments

Dear Dr. Anderson,

In the Mississippi Doctor a correspondent says Jefferson Davis bought Beauvoir, and Mrs. Dorsey did not will it to him. The statement is partly right and partly wrong. The documents are in the museum here showing that in 1878 he bought it on the deferred payment plan. The first payment was due in January, 1879, and payments were to be made annually. Mrs. Dorsey died of cancer in June, 1879. In her will she gave Beauvoir and other property to Jefferson Davis. If he made any payment on Beauvoir it was done in January, 1879. We have not been able to find whether he made that payment.

Dr. Matas assisted T. G. Richardson with the operation on Mrs. Dorsey, which was performed in a room in the St. Charles Hotel on a kitchen table. After Dr. Richardson had operated and found an inoperable cancer, and while his patient was still under ether, he lifted her from the table and put her in bed. While he had her in his arms he kissed her.

Said Matas: "Had old Toby known then that she had willed Jefferson Davis Beauvoir and five plantations, he would have kissed her twice at least".

Yours,
W. A. Evans

Beauvoir House
Biloxi, Miss.

We are delighted with this spicy bit of information from the above barbasheeles.—Ed.

Dr. J. P. Conn, prominent Monticello physician and veteran member of the Mississippi Legislature, died at Jackson, Miss., following a heart attack on Wednesday, August 6. Dr. Conn had practiced in Monticello since 1912. He received his M.D. degree at Tulane University in 1895 and had had postgratuate work in New Orleans and at Vanderbilt University. He was a member of the Monticello Baptist Church and was a leader in social and civic affairs. He is survived by his wife, Mrs. Nannie Felder Conn, two sons and five daughters, one brother and two sisters, five grandsons and six granddaughters. Funeral services were held from the Monticello Methodist Church with burial in the Felder's Camp Ground, south of Monticello in the family plot.

A copy of THE ENCYCLOPEDIA OF MEDICINE, SURGERY, AND SPECIALTIES, published by F. A. Davis Company, was left at the Buena Vista Hotel during the state meeting. If it is yours, please write Manager F. M. Runnels, and he will be glad to send it to you.

Dr. W. C. Norris, prominent physician at Quitman, died at his residence, Wednesday, September 3, at 5:40 A.M. Dr. Norris had practiced in Quitman for the past 30 years. He was a first lieutenant in the World War and past commander of the American Legion at Quitman. He was a former member of the legislature. Dr. Norris is survived by his wife, three daughters, two sons, two sisters and three brothers.

The Journal of the American Medical Association has been carrying a series of articles entitled Legal Responsibility for Medical Malpractice. The first of the series appeared March 8 and others followed on May 10 and 31, June 14 and 21 and July 5. This is a splendid service on the part of this journal. We are paging our splendid associate editor, Dr. Stanley Hill, to review these articles for the readers of THE MISSISSIPPI DOCTOR in concise and brief form. Of this he is capable of doing well.

NORTHEAST MISSISSIPPI THIRTEEN COUNTIES SOCIETY

PROGRAM

Meeting called to order by the president, Dr. H. L. Scales, Jr., Starkville, Mississippi.

Invocation by, Rev. T. P. Sharp, Pastor Christian Church, Aberdeen, Mississippi.

Abdominal Wounds, Dr. J. P. Fatheree, West Point, Mississippi.

Congenital Hare-lip and Cleft Palate, Dr. J. T. Davis, Corinth, Mississippi.

The Cancer Problem Today, Dr. J. T. Nix, New Orleans, Louisiana.

Certain Considerations of Cancer From the Pathologist's View, Dr. R. M. Moore, University, Mississippi.

Acute Poliomyelitis, Dr. H. H. McClanahan, Columbus, Mississippi.

COMING MEDICAL MEETINGS

The Fourth Annual Forum on Allergy will hold its meeting at Detroit, Michigan January 10th and 11th, 1942.

The Second American Congress on Obstetrics and Gynecology will be held in St. Louis, Mo., April 6 to 10, 1942. All of the meetings and both the Commercial and Educational and Scientific Exhibits will be held in the Public Auditorium.

The American College of Physicians announces its Twenty-sixth Annual Session to be held in St. Paul, Minn. April 20-24, 1942.

Southern Medical Meeting—St. Louis, Mo., November 11-14, 1941.

The Second American Congress on Obstetrics and Gynecology to be held in St. Louis, Missouri, from April 6-10, 1942.

TUBERCULOSIS IN OUR COLLEGES

Ten years ago no more than a dozen school health administrators were actively seeking out tuberculosis among the students in colleges and universities, despite the acknowledged predilection of the tubercle bacillus for those of this group. Today 248 institutions of higher learning have some form of program for the finding of tuberculosis on the campus. The Tenth Annual Report of the Tuberculosis Committee of the American Student Health Association is both a record of progress and a reminder of what is still to be done.

For the academic year of 1939-40, 248 colleges had some form of tuberculosis control, an increase of about 50% over the preceding school year. Necessarily, where a movement is gaining new adherents annually, the character of individual programs varies greatly. There are still 629 colleges with no program but about 30 of these hope to initiate one this year. Although 402 schools neglected to return the questionnaire sent by the Committee, there were 193 additional replies this year. In spite of this, six states have failed to report a single collegiate tuberculosis program.

SOMETHING SHOULD BE DONE ABOUT BIRTHDAYS

W. H. Banks
Philadelphia, Miss.

Now I wonder who started birthdays and arranged their schedule. It is mighty nice to have them, but I believe if we are to observe them they should be regular throughout life. Everyone who has reached middle life knows they do not come with regularity then.

Parents give a child a birthday gift right along until he is about sixteen and then time hangs heavily while he anxiously waits to reach twenty-one. Then it looks like everyone forgets his birthday when he wants one the worst. Time hangs more heavily for the young man or woman who does not have a regular job, but just goes to school all the time. During this period birthdays seem to be about two or three years apart. But after twenty-one they return and come right along while one is busy getting his knowledge organized into productive business. And they don't bother him any more until he reaches forty. At this time, just when he is getting his young life well settled into business, begins to understand a little about life, and gets all set for success and comfort and permanency, the birthdays get all upset again and begin rushing along, about two a year. At this age a fellow is very busy, or supposed to be. He does not have time to stop and celebrate birthdays, yet they keep rushing on him. A man could really succeed if the birthdays didn't keep pressing him and upsetting his age equilibrium. He finally adjusts himself to the two-year system about the time he reaches the half century line. Now he is very busy, more than he has ever been, and more interested in success. But again the birthdays come in a mighty rush, increasing to about three a year. He does not want them. He tries to forget them, but some one will everlastingly remind him. He can hear whispers about his growing old, aging. It is most unkind and inconvenient to be worried with birthdays from fifty to sixty, but there is no law to forbid them.

I am sure every one feels about as I do. I am wondering if we could not hold a birthday schedule convention and get candidates for the legislature to put a plan in their platforms. We feel sure it would be popular.

When the youth is celebrating a birthday, we try to make him feel like he is the salt of the earth, that the hope of the family, the state and the nation is sliding upon his shoulders, or will very soon. We try to make him feel like he will soon have the earth in his hand with the fullness thereof. But, alas, when he reaches fifty, the surprise birthdays begin, the sympathetic parade, and someone will say you look so, so well, how in the world do you do it? And another will say, you look so young, but you can't hold it always. When you do start breaking, old boy, I am afraid you will go down like the Titanic. Another will look you over more closely, examine your hair, your clothes, ask you about your eating, and then remark, well, of course you are beginning to show your age. You stoop a little and there is a little something on your tie and your shoestrings are a bit loose.

Of course every one likes a birthday cake. But, my, when he reaches sixty the candles it does take! They must be placed so he can blow them all out at one whiff. And when he sees that cake set out sixty candles strong, when he has not thought of a birthday for months, he sighs and realizes that his days are really numbered. If these candles could just be grouped in sections, it would make a fellow feel better, but, alas, the custom seems fixed. As time goes on and the birthdays keep piling up with talk about his age, he feels like he has stolen something from Father Time and that someone else has been cheated out of life. He feels like getting off to himself and just letting the world rush by. He feels too old to do any more for the human race, and all that is left to him is the privilege of just meditating on the past.

I would like to see one experiment made. That would be to give a man a chance by never referring to his age, always call him "boy" and make him feel like everything in his community depends on him in the future. I think the "Old Boy" would straighten up and throw out that chest every year and go on producing, putting those self-taught and tried rules into common use and really live ten years longer and be an asset instead of an encumbrance on the human race. We might all try it a while and see.

Now, I want to explain that this is written from the heart and that I hold no ill feeling toward any one about this. However hard it weighs upon my conscience,I will say that if any man will agree to make some statute regarding this I am for him. I am just recovering from a BIRTHDAY.

Book Reviews

The ninth edition of MACLEOD'S PHYSIOLOGY IN MODERN MEDICINE is a book of 1256 pages and fully revised where indicated. The general plan and purpose of the edition is the same as in the eighth. The revisions have been made to meet the requirements and in keeping with advancement in knowledge on the subject. Howard J. Curtis has rewritten the chapters on electrical excitation and conduction of the nerve impulse, and Walter S. Hood has contributed a chapter on the urinary bladder. Several new chapters have been added, but others have been combined to keep the total number the same as in the previous edition.

There is nothing more important in the practice of medicine than the clinical application of physiology. As stated in the preface of this book, physiology may be considered as an application of the known laws and facts of physics and chemistry to explain the functions of living matter. The facts in physiology are taught the student in every medical school, but usually but little attention is given to the relation of this knowledge to the practice of clinical medicine. MACLEOD'S PHYSIOLOGY IN MEDICINE edited by Dr. Philip Bard, Professor of Physiology, Johns Hopkins School of Medicine, has as its chief purpose to bring the present knowledge of physiology to the medical profession in an understandable and workable form. Surely no book has been written that should be of more interest to the scientific medical mind. The information in this book is really essential to safe and successful practice even by the practitioner.

This great mass of important information is brought to the profession in a well-organized and readable form. Dr. Bard has been assisted by nine of the country's most able men as collaborator. The book is divided into nine parts, carrying hundreds of illustrations, some of them in colors to aid in teaching the facts, Send your order to C. V. Mosby, St. Louis. The price of this twelve-hundred-page book is only ten dollars.

HEMORRHAGIC DISEASES PHOTO-ELECTRIC STUDY OF BLOOD COAGULABILITY, by Kaare K. Nygaard, M.D., former Fellow in Surgery the Mayo Foundation. This book is published by the C. V. Mosby Company, St. Louis, Missouri. It is a brand new work, vigorously written and well illustrated. Any book that deals intelligently and scientifically with the blood of the human body is valuable and important to the medical fraternity. This book seems to treat the subject from a new angle and will be very valuable in determining certain procedures with reference to blood conditions. Photo-electric study of blood coagulability should be very interesting and certainly very helpful in arriving at certain conditions and obtaining certain information necessary in diagnosis and treatment. Physicians will find this book to be something they have been waiting for.

METHODS FOR DIAGNOSTIC BACTERIOLOGY, A complete Guide for the Isolation and Identification of Pathogenic Bacteria for Medical Bacteriologic Laboratories, by Isabelle G. Schaube, A. B., of Johns Hopkins University School of Medicine, and published by the C. V. Mosby Company of St. Louis, Missouri. Price $3.00. The growing importance of this character of work among the physicians makes this book one of great help in that line of work. In modern practice much depends on "cultures" and anything that tends to aid in diagnosis is of vital importance, hence the value of this new book to the medical fraternity is very great. The comprehensive treatment of cases and cultures of all kinds makes the book desirable for any medical library or doctor's desk.

Mississippi State Medical Association

Organized 1867

Next Meeting: May 12, 13, 14, 1942, Jackson

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COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	W. R. Brumfield, Gloster	Anderson Butler, Liberty	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. A. Slack, Friars Point	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	C. A. Kirk, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	H. L. Scales, Jr., Starkville	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	C. E. Catchings, Woodville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Eye—S. S. McNair, Jackson.

Ear, Nose and Throat — Alston Callahan, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

DERMATOLOGY

INDUSTRIAL DERMATITIS FROM GLOVES: EFFECT OF DERMATOPHYTOSIS (Ringworm); "Glove Phytids." W. D. Norwood and E. E. Evans, J.A.M.A. 114.: 1523 (April 20) 1940. Doctor Herbert Rattner, Archives of Dermatology and Syphilology, Vol. 44 No. 2, August 1941.

"Norwood and Evans found that 84 per cent of the employees examined in a large industrial plant showed clinical evidence of dermatophytosis of the toes. More time was lost in a year because of dermatophytosis than for all other cutaneous diseases combined, infection excepted. They studied 20 men who had eczematous rashes on the hands. The workmen wore leather gloves for protection and the eruption usually improved when gloves were not worn. However, permanent cure was not obtained until the focus of dermatophytosis on the feet was eradicated. It was thus concluded that the factors involved in the causation of the eczematous eruptions of the hands included both the fungous focus on the feet and the maceration following the wearing of the leather gloves. It was further noted in support of this supposition that eczema of the hands was fifteen times as frequent in workers who wore leather gloves as in those who did not."

In commenting on this experience it has been my observation that patients who wear rubber gloves when washing dishes and clothes because they have been told that the soap and water makes their eczema worse have not cured their eczema but in most cases caused it to become more acutely inflamed. It would probably be better to advise these patients to use a soapless detergent and to keep their hands out of soapy solution all together while the eczema is being treated.

RECURRENT HERPES OF THE CORNEA AND RECURRENT HERPETIC FEVER: RESULTS OF TREATMENT WITH SMALLPOX VACCINE. P. L. Davis, J.A.M.A. 114:2098 (May) 1940. Doctor Herbert Rattner, Archives of Dermatology and Syphilology Vol. 44, No. 2, August 1941.

"Davis reports uniformly successful results in the treatment of recurrent herpes simplex by the use of smallpox vaccine. He tested 3 patients with herpes of the cornea and 11 patients with recurrent herpetic fever. He advises vaccinations every ten to fourteen days for from four to eight times."

HISTAMINASE IN THE TREATMENT OF COLD ALLERGY. T. W. Baker, J.A.M.A. 114:1059 (March 23) 1940. Doctor Herbert Rattner, Archives of Dermatology and Syphilology Vol. 44, No. 2, August 1941.

"Baker studied 2 patients with cold allergy as evidenced by the development of redness, edema and urticarial wheals on the exposed skin. Acceleration in the pulse rate, a drop in the blood pressure and the development of headache were noted shortly after a test immersion of a hand in water at 10°C. (50°F.) for ten minutes. Successful results were obtained by Baker in the 2 patients with a combination treatment of (1) graded desensitization to cold and (2) administration of histaminase by mouth in a total dose of 515 and 300 detoxifying units respectively. A relapse in 1 patient responded favorably to 100 units of histaminase alone."

JGT

EYE

GONIOSCOPY

1. Gonioscopy in relation to common Glau-

coma operations, by J. M. McLean. Transactions American Academy, May-June, 1941, page 176.

2. Relation of Gonioscopic Findings of Incidence of Secondary Glaucoma in Operative Aphakia, by P. C. Kronfield and E. E. Grossman. Transactions American Academy, May-June, 1941, page 184.

3. Choice of Operation in Glaucoma, by Otto Barkan. American J. Oph., July, 1941, page 768.

4. Glaucoma, by Otto Barkan. American J. Oph., October, 1938, page 1099.

5. Gonioscopy and Glaucoma, by Saul Sugar. Archives Oph., March 1941, page 674.

6. Technique of Goniotomy, by Otto Barkan. Archives Oph., February 1938, page 217.

7. Gonioscopic Findings after Elliott Trephine, by U. Troncoso. Amer. J. Oph., February 1935, page 103.

These papers are but few selected from recent ophthalmological literature, replete with reports of many outstanding investigators on the subject of gonioscopy. This review is of the subject rather than of any single article and was suggested at a recent meeting of ophthalmologists and otolaryngologists when several professed their own unfamiliarity with it. General practitioners are therefore hardly to be expected to know of this recent advance in the science of diagnosis and treatment of one of the most frequent causes of blindness, and it is for them that this is being written.

Modern gonioscopy, or the science of examining the angle of the eye with considerable magnification and bright illumination, was initiated in 1925 by Troncoso's paper in which he described the specially built thick lens to fit directly against the anesthetized eye and the modified slit lamp for viewing it through this lens. He demonstrated conclusively that the anterior synechiae (or adhesions between the iris and posterior surface of cornea, or more accurately between the scleral spur which is joined to the cornea, just anterior to the angle, and the iris) were formed as a result of glaucoma rather than the cause as had been previously believed.

This remained more a method of refined examination and experimental study from then until Barkan of San Francisco startled the ophthalmological world by the presentation of an elaborate and rather intricate device with which he operates on the glaucomatous eye under direct vision with the slit lamp. Because of such a new departure, and because the series of cases was small, Dr. Barkan was subjected to considerable criticism tempered by his previous reputation for excellent work. As the number of successfully treated cases increased, and the knowledge of the chamber angle, thusly stimulated, grew larger, this type of examination became well entrenched as a practical routine with glaucoma cases though few have practiced Dr. Barkan's surgery.

The technique of gonioscopy is not difficult for the ophthalmologist or painful or fatiguing for the patient. A few drops of ½% pontocine or similar durg is instilled into the conjunctive sac, and after a few moments the contact lens is placed against the cornea. Several types of these are procurable, having openings in various places for filling the space between it and the eye, and of various types of glass. Recently, a non-breakable but easily scratchable plastic contact glass has been made, and it is this type that the reviewer has been using. This has no opening for filling, but it has worked satisfactorily by having the patient lower his head forward, open his lids widely, and inserting it, already filled with normal saline. The first few times an air bubble may be introduced but a little practice will give dexterity. The eyelids come over the edges of glass and act to secure it in place, and then the patient's head is placed into position for viewing with the slit lamp. Several different methods of illumination and magnification have been suggested and used, and in the reviewer's experience the Zeiss Comberg Slit Lamp with the observer somewhat to the side of the plane of the iris is very satisfactory.

In actual gonioscopic examination, one begins at the iris and moves forward toward its insertion on the inner surface of the ciliary body, then on to the trabecula and cornea. The gonioscopic appearance of the ciliary body and its inner covering of pectinate ligament tissue depends on the amount of pigment in the uveal tissues of the eye. The two important landmarks in the wall of the angle are the anterior edge of the trabeculae. Schlemm's canal, which is concerned with removal of the aqueous, is deep to the posterior portion of the trabeculae. The normal chamber angle is shallowed greatly by atropine and deepened by miotics.

What are the broad findings, and how may they be applied to a case of glaucoma, one may well ask (if indeed, he has read thus far).

To begin with, gonioscopists tell us from their knowledge that the classification of glaucoma into a compensated and non-compensated, congestive and non-congestive glaucoma, always known to be imperfect, may be dispensed with almost entirely. Omitting from the discussion glaucoma secondary to mechanical causes, such as a long-continued iridocyclitis, and considering the various types of "primary" (i.e., etiology unknown) glaucoma, they tell us that chronic glaucoma should be classified into a "deep chamber" glaucoma, visualized by gonioscopy in the form of a "trabecular pigment band" (or in simpler words, the trabeculum itself is impervious to a greater or less degree, but the chamber itself is of a normal depth, or greater than normal depth), and a "shallow" angle or iris block, the obstruction of the outflow is due to closure of the angle by the iris root lying in apposition to the angle wall and later forming adhesions at that point.

Acute glaucoma, according to the gonioscopists, is best treated surgically by an iridectomy; the "deep chamber" type of chronic glaucoma by a cyclodialysis, the "shallow chamber" in early stages by a basal iridectomy and cyclodialysis in late stages. In the early stages of the deep chamber type, before any damage to the optic nerve has occurred and there is therefore a little indication for iridectomy or external fistulization, the obstructed trabeculum may be incised or removed by goniotomy. (This could be done only by a surgeon especially equipped for and specially trained for such surgery, and Barkan, leading exponent of such surgery, does not seem as enthusiastic in July, 1941, as he was in October, 1938.)

It is the reviewer's belief that goniotomy will never be a widely practiced form of surgery for glaucoma, but that gonioscopy will become more and more recognized as an excellent method of study of hypertensive eyes. Also, it is likely that the experience and knowledge that time brings will endorse this type of pathological classification, thus indicating preferred surgical procedures.

Although this review may seem too detailed to readers, it has mentioned briefly but the outstanding points of a vast amount of intensive and exhaustive clinical and research work, and it should serve to show the problems which beset a conscientious and progressive ophthalmologist.

Our clinical papers are often of the "plea" type, and ophthalmologists are prone to become wearying to their audiences in their cry for early recognition of this disease and imploring the general physician to feel the hardness of the eyeballs of their patients. Yet, still they come, with a half dozen pairs of glasses, fitted by optometrists or at ten-cent stores, with no idea of having any disease; or even worse, with a note from some rural physician, your friend, stating that this patient has cataract, and because he knows of your surgical ability he has advised her, now that he has had her wait until they are "ripened", to come to you to restore her vision. A glance with the ophthalmoscope through the clear lens into the fundus confirms your worst fears; the optic nerve is deeply cupped and white with atrophy; the eye is stony hard; the vision gone forever.

Situations like these condition the ophthalmologist to further effort in urging his colleagues in general practice to refer their eye cases early.

OBSTETRICS AND GYNECOLOGY

The Treatment of Pelvic Endometriosis

W. T. Dannreuther M. D. Am. Jr. Obs. & Gyn., 41:461, 1941.

It seems logical to suggest that the pernicious custom of plugging the vaginal lumen with cotton and other fibrous material during menstruation by the modern woman may be a causal factor in the apparent increasing incidence of endometriosis found in recent years.

During the past ten years the author operated upon 115 women suffering with endometriosis. There were 39 instances of adenomyosis; 10 of adenomyoma; 63 of chocolate ovarian cyst and widespread endometriosis, and 3 cases of endometrioma. The use of progesterone has apparently helped to keep some of the mild cases with a tentative diagnosis of endometriosis more comfortable. The chief symptoms in all forms of endometriosis seem to be abnormal bleeding, pelvic pain, and acquired dysmenorrhea. Location of the pain depends on the tissues involved. Dyspareunia is a common complaint when the posterior vaginal vault or utero-sacral ligaments are involved. The abnormal bleeding is characterized by menorrhagia, shortened intermenstrual intervals, or clots. Dysmenorrhea may be premenstrual, intermenstrual, or postmenstrual. Other symptoms observed were urinary frequency, leucorrhea, and evident abdominal tumor. Concomitant fibromyoma occurred in 40% of the cases. Most of the occurrences of adenomyosis and adenomyomata are found in women of more than 35 years of age, and hysterectomy is necessary for cure. Forty per cent of the cases of chocolate cyst and widespread endometriosis occurred in women of less than 35 years of age, and presented the problem of conservatism of ovarian tissue. Intra-uterine radium therapy may be of value in treatment of adenomyosis, but the value of roentgen ray therapy in cases of adenomyomata and chocolate cyst is questionable. Complete ovarian extirpation is essential for the cure of bladder and intestinal wall involvements and is preferred to resection of the bladder or bowel.

While it is not possible to standardize surgical procedures for the operative treatment of endometriosis, certain technical details have proved of value which simplify the operative handling of these cases. These include postponement of the actual pelvic operation until the pelvic organs have been dissected free, and the use of suction for the aspiration of the contents of chocolate cysts in order to clear the operative field, avoidance of over-enthusiastic separation of the uterus and bladder with resulting injury to the latter, the use of rubber sheets for walling off where the field cannot be peritonealized. The use of iodoform gauze as packing in cases of persistent oozing as attempts to clamp and ligate every small bleeding point are futile and a waste of time. Drains are brought out of the lower angle of the wound and removed after 48 hours.

COMMENT: This paper is reported because it gives the personal experience and recommendations of an outstanding man in gynecology. His teachings have always been sound and conservative. Two recent personal cases might be worthy of mention. One, a single woman of 35, was seen with acute abdominal symptoms. She had a large endometrial cyst that had ruptured and filled the abdomen with old blood. She had never had any previous symptoms of pain and menstruation had always been normal. The other case had marked urticaria and generalized edema at each menstrual period which was completely relieved by removal of the endometrial ovarian cysts.

J. F. Lucas.

PEDIATRICS

The Effects Of Asphyxia On The Newborn Infant—Stewart H. Clifford, Journal of Pediatrics, 18:567 (May) 1941.

"The human fetus is particularly vulnerable to any interference with its normal oxygen supply. Asphyxia of the fetus may initiate a chain of physiologic and pathologic changes affecting every organ and tissue in the body and resulting in a wide variety of otherwise unrelated clinical symptoms in newborn infants.

"Asphyxia is probably the most important single cause of disease and death in newborn infants. It is being recognized increasingly as being responsible for many neurological changes manifest in older age groups. Asphyxia was found to be the chief cause of death in 58 per cent of 284 liveborn infants autopsied at the Boston Lying-In Hospital since 1931.

"A group of 11 newborn were selected for study from 164 who met asphyxia deaths as representing the clinical and pathologic changes that may be produced by intrauterine asphyxia . . . No mother had received any preliminary obstetrical analgesia before operation (cesarean section). No infant showed any autopsy evidence of traumatic intracranial injury . . . .

"Of the 11 infants in this series, six were in poor condition from birth and lived 4 to 36 hours. These infants exhibited respiratory distress from birth with labored, grunting breathing . . . They were subject to periods of apnea and to varying degrees of cyanosis; their cries were feeble; their reflexes were absent . . . The majority showed petechial hemorrhages and subcutaneous ecchymoses. One infant vomited blood, and two developed tense and bulging anterior fontanels.

"The phenomena of asphyxia may be confined to the intrauterine period, and recovery may set in at birth, providing the lungs are capable of supplying an adequate supply of oxygen to the tissues.

"Wilson and Farber have pointed out that the cohesion of the moist surfaces of the air passage in collapsed and airless lungs offers a considerable mechanical resistance to the entrance of air and that a relatively great force is required to overcome this cohesion during the initial expansion of an atelectatic lung. When this normal resistance to expansion was coupled with (1) an injured respiratory center, (2) an imperfectly developed thoracic mechanism, or (3) bronchial obstruction due to aspiration of amniotic sac contents, mucus or blood, the state of atelectasis would be prolonged to a pathologic extent.

"In the writer's cases, while the factor of injury to the respiratory center was doubtedly present to some degree, it was sufficiently prominent to explain all the findings. Bronchial obstruction was decidedly not a factor.

"The writer makes no effort forcibly to expand the asphyxiated infant's lungs but keeps him at complete rest in an atmosphere of 50 to 60 per cent oxygen. 'If the infant is to survive, its general condition quickly improves in oxygen, and usually by the fourth day the x-ray and physical examinations demonstrate expansion of the atelectatic areas. The point is of such great practical importance that more extensive studies are indicated.

"The liberation of edema fluid explains the findings of subcutaneous edema, sclerema, and fluid in the body cavities. The association of petechial hemorrhages with asphyxia is well known, but the importance of extensive bleeding in other locations should be stressed. Much of the gastro-intestinal, pulmonary, and liver hemorrhaging may be of this origin. Asphyxia, in the complete absence of trauma, may be responsible for varying degrees of hemorrhages into the cerebrospinal fluid, into the ventricles, and into the brain substance itself."

COMMENT

The great importance of proper treatment to regain normalcy in the asphyxiated newborn cannot be stressed too much. Many of these infants can be saved if they receive the necessary pediatric care from birth. This is so important that we are inclined to insist that closer observation be made, looking to satisfactory treatment in all babies who show any evidence of anoxemia or atelectasis at birth. The value of oxygen is most important. It is our practice to keep these babies in a warm incubator with continuous oxygen until the symptoms are markedly relieved.

H. F. G.

State Board of Health

Felix J. Underwood, M.D.

MISSISSIPPI'S TUBERCULOSIS FIELD CLINICS

W. D. Hickerson, M.D.
Supervisor, Field Clinics
Mississippi State Sanatorium

Seven years ago the State Board of Health initiated field clinics for the diagnosis of tuberculosis. During these seven years 35,000 contacts and suspicious cases have been examined and x-rayed, and it is believed that this vital work has been an important factor in the reduction of tuberculosis mortality.

Diagnostic chest clinics have long been recognized as an important part of any tuberculosis control program. In urban centers such clinics are stationary. They are designated places where persons suspected of having tuberculosis can go for expert examination and diagnosis. In rural areas, such clinics, of course, are mobile. The primary objectives of Mississippi's field clinics are: early diagnosis and education.

Before this work was begun seven years ago, a definite plan was drawn. This plan incorporated the effective features of other state programs, and in addition new features which would be adaptable to rural Mississippi. The main objective was to render a good diagnostic service to the physicians of Mississippi. This resulted in their assuming a greater interest in tuberculosis activities. It became a policy that only patients referred, in writing, by their physician would be examined and x-rayed. It was decided too that a careful chest examination would be done on each patient, for only by so doing could the full confidence of the physician and his patients be gained. It was urged that patients selected for examination by their physicians be persons who had been in direct contact with another case or persons having symptoms of lung disease.

Education is one of the most valuable weapons in tuberculosis control. With this realization, it is our practice to give each clinic patient a short talk, instructing him in the simple rules of prevention and cure.

Just what has this work accomplished in Mississippi? In addition to the 35,000 contacts and suspicious cases which were x-rayed and examined over the 7-year period, there were 5,000 individuals of high school, college, and factory groups, which have been examined by the tuberculin-x-ray method. Regular clinics are now being conducted in 65 of the 82 counties. These 65 counties comprise about four-fifths of the total population. Of the clinic patients examined, approximately 15 per cent have been found with some form of tuberculosis. This 15 per cent included newly diagnosed cases, cases previously diagnosed by the physician, and ex-Sanatorium patients. In marked contrast to this figure is the less than 1 per cent diagnosed in the school and factory groups. The latter group is considered a fair sample of the general population. The clinic patients are a carefully selected group of individuals suspected of having tuberculosis, and the findings in this group indicate the wisdom and greater value of examining carefully selected patients when facilities are limited. It would, of course, be valuable to examine the entire population. It may be possible to some day achieve this goal when facilities are expanded and with the new, more rapid and cheaper methods of making x-rays put to widespread use.

As the years have gone by, there has been noted a changed attitude regarding the preventability and curability of tuberculosis. Seven years ago nearly every clinic patient thought that tuberculosis was inherited and that it was incurable. Simple methods of education have remedied this situation and they now understand that it is an infectious disease caused by the tubercle bacillus. They also understand that they get the tuberculosis germs from persons already infected and that the disease does not present a hopeless outlook when discovered early. In fact, it is among the easiest of all chronic diseases to cure when discovered in time. This changed attitude on the part of the patients has been of great help in the tuberculosis control program. People no longer fear the disease as they did: they now seek a definite diagnosis while in the past they evaded or shunned it until it was too late to do them much good.

There are many weapons used in combatting the spread of tuberculosis. It is impossible to determine the absolute value of any single method. A good appraisal may be had by comparing death rates before and after the introduction of any new method. In 1933, the year before diagnostic field clinics were started in Mississippi, 1,314 deaths occurred in the state from this disease. In 1940, there were 1,057 deaths from tuberculosis. This represents nearly 300 less deaths in 1940 than in 1933. During the 7 years preceding the diagnostic field clinics, 11,266 persons died of tuberculosis. During the 7 years since the beginning of these clinics, 8,210 have died. It is impossible to know just what measure of the credit for this saving of lives is due to the diagnostic chest clinics. However, it is obvious that this great decrease in the death rate has been influenced in no small degree by the field clinics and this will be a spur to future accomplishments. Physicians and health officers of Mississippi have worked hand in hand with the clinicians and the success of the tuberculosis control program has been due largely to their splendid coöperation and help.

Dr. Henry Boswell, Director of the Division of Tuberculosis Control, has just submitted the biennial report of that institution (1939-1941) for inclusion in the State Board of Health's complete report, wherein he relates the following account of the work of the Field Clinic Department:

The field clinics of the state have been operated out of this institution steadily during the biennium with only two clinicians. It is impossible for them to begin to do the work for which demands are made. The work of these clinicians, traveling over the state with complete equipment to make needed x-rays and other examinations for the people of Mississippi, is one of the most important jobs of the whole tuberculosis set-up, and one of the most popular. Demands are now such that the services of three or four more clinicians would be required if money and trained men were available.

During the biennial period the two clinicians have examined 10,552 people, taking x-rays on all of them. Of these people 7,051 were white and 3,501 were colored. Holding clinics every week, each of the men averages 60 patients per clinic in 3 days. Examinations are made of many school and college groups over the state, including many groups of teachers. In almost every instance one or more pupils are found in these groups, exposing the infection to others. In the total group of patients examined about 15 per cent had demonstrable diseases. The clinicians hold consultation with family physicians regarding the care of the patient at home and also show the physicians how to make application to the State Sanatorium for hospitalization of cases in need of this attention.

THE POLIOMYELITIS SITUATION IN MISSISSIPPI

As was predicted in this section of the August number of the Mississippi Doctor, poliomyelitis has continued its increase in incidence during the month. From January 1 through August 19 a total of 86 cases were reported. With the exception of 23 of these cases all have occurred since July 1. This is much more than the normal incidence.

The distribution of the cases which have occurred since January 1 is shown on the accompanying map. It should be noted that the highest incidence to date is in and around Yazoo County. The incidence in the remaining counties is little if any above the normal incidence. It is anticipated that the disease will continue to occur in usual proportions throughout August and September. Physicians are urged to watch for this disease and to report cases and suspected cases immediately upon discovery, so that necessary steps may be taken to prevent spread if possible, and to make available such treatment facilities as can be had through the assistance of local infantile paralysis chapters, the Crippled Children's Service of the State Department of Education and the Poliomyelitis Clinic which is now in operation on the old asylum property at Jackson.

This clinic has been set up in the present emergency through the joint coöperation of the State of Mississippi, the Federal Government through the Crippled Children's Service of the State Department of Education, and the National Foundation for Infantile Paralysis through the state chairman, Dr. Felix J. Underwood.

The Poliomyelitis Clinic is designed to serve particularly thoses cases which the private physicians and families concerned are unable to care for properly. Equipped with iron lungs, splints, braces, beds for overnight care, and other necessary items, the clinic will have the services of an orthopedic surgeon and pediatrician available each day except Wednesdays and Sundays. Emergency cases will be cared for on these days but cases coming for routine services such as braces, splints and so on will be received on other days. The registered nurses will be at the clinic day and night.

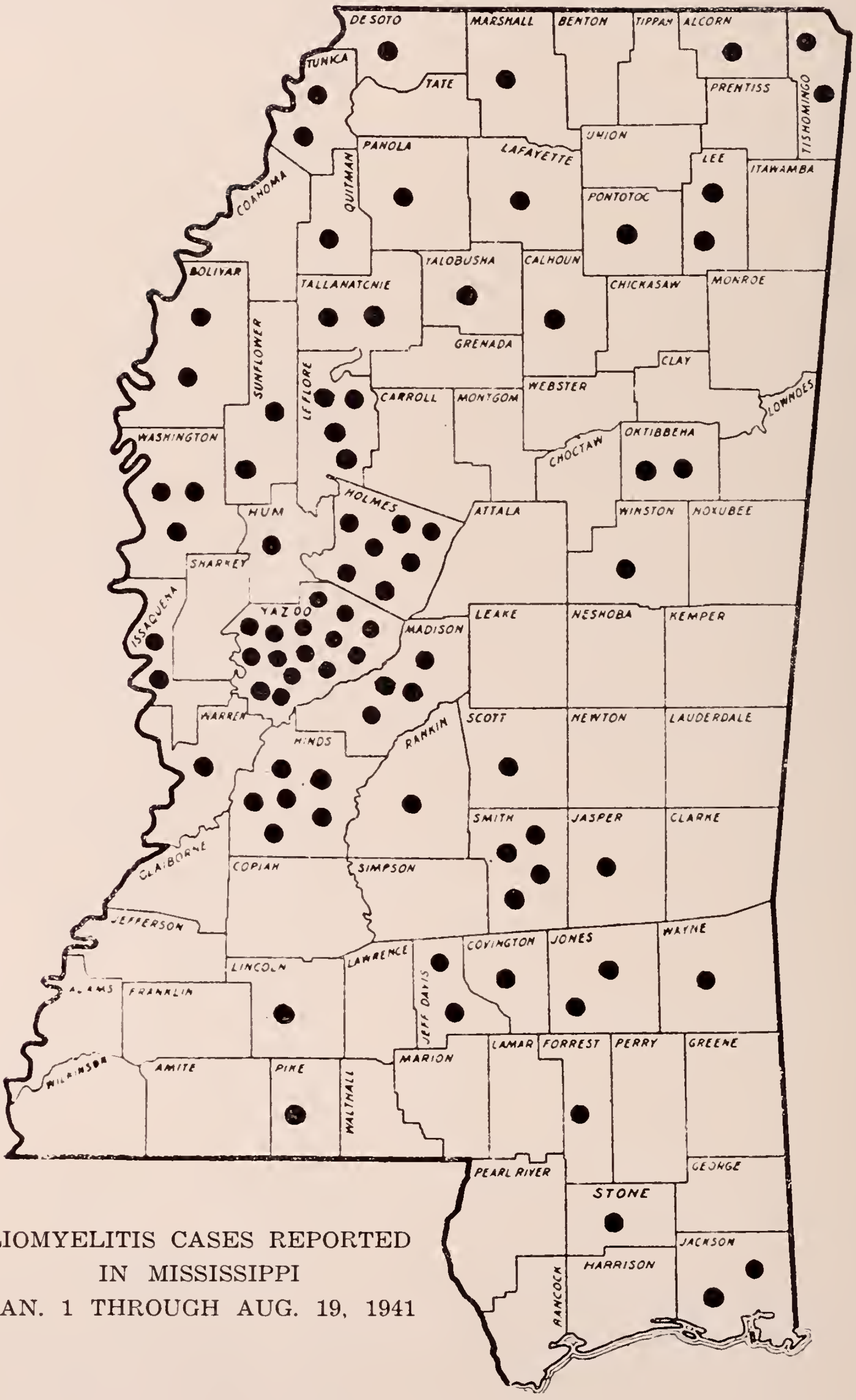
Orthopedic nurses will visit cases in their homes as far as it is possible to do so and will assist physicians in applying splints and other protective measures in the early stages of the disease.

Institutes for public health nurses were conducted in ten cities located throughout the states, from August 19 to August 30. These were under the competent direction of Miss Norma Pfrimmer, R.N., Assistant Consultant Nurse, National Organization for Public Health Nursing, sent to Mississippi by the National Foundation for Infantile Paralysis. In addition to giving instruction to nurses and others, Miss Pfrimmer will give orthopedic assistance to the Poliomyelitis Clinic and the Crippled Children's Service.

Physicians treating cases of poliomyelitis who desire assistance through the Poliomyelitis Clinic in applying splints, casts, and in securing orthopedic and pediatric consultation services should contact the local health officer for information relative to policies and procedures before sending cases to the clinic in Jackson.

Expert Epidemiologist studies Mississippi Case

Dr. L. L. Lumsden, who has had wide experience in the epidemiology of poliomyelitis, has been assigned to Mississippi by the National Foundation for Infantile Paralysis. While in the state he is to be associated with the Division of Preventable Disease Control of the State Board of Health and expects to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POLIOMYELITIS CASES REPORTED
IN MISSISSIPPI
JAN. 1 THROUGH AUG. 19, 1941

make detailed studies of as many cases of poliomyelitis as is possible in coöperation with the Division and with private physicians and county health departments.

In addition to poliomyelitis, Dr. Lumsden has specialized in the epidemiology of other diseases, notably yellow fever, bubonic plague, and tuberculosis. He originated and developed the full-time plan of rural health service in the United States. During his long period of service with the United States Public Health Service he was author of numerous publications on typhoid fever, rural sanitation, rural health work, tuberculosis, and poliomyelitis. His wealth of knowledge and rich experience make him a valued associate in the present efforts to control poliomyelitis.

MISCELLANEOUS NOTES

The Rockefeller Foundation, New York City, recently sent to Mississippi two individuals who spent more than a month observing the methods of the Division of Sanitary Engineering. One of these was Mr. Z. D. Lee, who it is understood will organize a Division of Sanitary Engineering for his government in China, to be located at Chungking. The other was Mr. Juan Granados of Cuba, who upon return to his country will direct all malaria control activities of the island. Mr. Granados has worked for some time for the Rockefeller Foundation in Cuba on the construction of concrete inverts for the elimination of the Anopheles mosquito breeding areas. Both public health workers were very much interested in Mississippi's health program.

Miss Carolina Randolph, Associate Director of the Division of Health Studies of the Commonwealth Fund, New York City, spent several days in Mississippi during August for the purpose of making studies of the costs of various health services. The data she compiled will be incorporated in a paper to be given before the health officers' section of the American Public Health Association meeting. Dr. Felix J. Underwood will participate in the presentation of the paper.

Dr. Raymond F. Mayer, former Health Officer of Sunflower County, has been appointed Director of the Claiborne County Health Department. His appointment, effective August 1, relieved Dr. H. B. Cottrell of the State Board of Health staff, who had served as Acting Director of this department since its organization on April 1, 1941.

Dr. James F. Bradley, who completed a three months' period of training and observation at the Lauderdale County Health Department Training Center, was appointed Health Officer of Amite County, effective August 16. to succeed Dr. J. A. Sproles. Dr. Sproles was appointed director of the Marion County unit on August 10, succeeding Dr. J. M. Campbell, appointed Director of the Tallahatchie County Health Department.

Dr. C. R. Gillespie, formerly Director of the Sunflower County Health Department, is now connected with the Field Advisory Unit of the State Board of Health.

A three months' period of observation and training has been completed recently by six sanitation supervisors, who are to be placed soon in full-time county health departments. Four public health nurses were assigned to the Lauderdale County Health Department Training Center and two to the Sunflower County Health Department for a period of training. Such training is very effective conditioning for public health work.

County Societies

DESOTO COUNTY

LIFE

We know that life is a curious proposition after all—one day in high acclaim, the next day dead and the following day forgotten. That we are born, live awhile and die and do not know the reason why, puzzles us. We know of a certainty that we should make suitable preparations for that Sphere where all is made right, that one's attire must be faith, truth, meekness and love. These lines are made up from a number of poems and and make interesting couplets:

Why all this toil for triumps of an hour?
—Young.

Life's short summer-man is but a flower.
—Dr. Johnson.

By turns we catch the fatal breath and die.—Pope.

The cradle and the tomb alas; how nigh.
—Prior.

To be is better far than not to be.—Sewell.
Though all man's life may seem a tragedy; —Spencer.

But light cares speak when mighty griefs are dumb—Daniel.

The bottom is but shallow whence they come.—Raleigh.

Thy fate is the common fate of all:—Longfellow.

Unmingled joys here no man befall;—Southwell.

Nature to each allots his proper sphere. —Congrove.

Fortune makes folly her peculiar care.—Churchhill.

Custom does often reason overrule.—Rochester.

And throw a cruel sunshine on a fool.—Armstrong.

Live well; how long or short permit to Heaven.—Milton.

They who forgive most shall be forgiven. —Bailey.

Sin may be clasped so close we can not see its face.—French.

Vile intercourse where virtue has no place. —Somerville.

Then keep each passion down, however dear. —Thompson.

Thou pendulum betwixt a smile and tear.—Byron.

Her sensual snares let faithful pleasure lay.—Smollett.

With craft and skill to ruin and betray. —Crabbe.

Soar not too high to fall but stoop to rise; —Massinger.

We masters grow of all that we despise. —Crowley.

Oh, then renounce that impious self esteem. —Beattie.

Riches have wings and grandeur is a dream.—Cowper.

Think not ambition wise because it's brave. —Devenant.

The paths of glory lead but to the grave. —Gray.

What is ambition? 'Tis a glorious cheat. —Willis.

Only destructive to the brave and great.—Addison.

What's all the gaudy glitter of a crown? —Dryden.

The way to bliss lies not on beds of down. —Quaries.

How long we live, not years but actions tell. —Watkins.

That man lives twice who lives the first life well.—Herrick.

Make, then, while yet ye may, your God, your friend.—Mason.

Whom Christians worship, yet not comprehend.—Hill.

The trust that's given guard, and to yourself be just.—Dans.

For live we how we may, yet die we must. —Shakespeare.

They were guided by the same tenderness that would not overlook the sparrow's fall;
If one loves Him and keeps his Commandments all.—Longstreet.

The Memphis Open Air Theatre recently presented "The Pink Lady", a light opera of engaging notice in which the beautiful song, "My Beautiful Lady" pervades the whole. The graceful and gracious Miss Grace Philpot role of Angele, was second only to that of the imported prima donna from New York, Miss Helen Marshall. Miss Philpot is the daughter of Dr. and Mrs. Van Buren Philpot, of Houston. Dr. Philpot is a surgeon of wide acclaim. Miss Philpot is a graduate of that famous Mississippi college at Blue Mountain and we predict for her much success in her chosen profession.

Tobacco is a strange plant with an even stranger history. Known to the civilized world for less than 400 years, it is sometimes called a curse; at other times, the greatest solace of a troubled world. English adventurers came to America in 1607 because of gold; they stayed because they found tobacco. One tablespoonful of the seed is enough to sow six acres. It is a cousin of the petunia and the Irish potato; yet is has the temperament of an orchid.

We know of the favorable tobaccos raised in the Southern states; in Turkey and in Greece, that little country whose soldiery exhibited such wonderful bravery recently at Thermophylae. But little did we think that tobacco would be grown commercially in Canada. Out of the same ground which supported only milkweed a few years ago, comes 60,000,000 pounds of bright, flue-cured tobacco which would bring an envious gleam to any

Kentucky planter's eye.

This is in addition to 30,000,000 pounds of heavy leaf tobacco sold yearly at the Quebec markets.

There are many different varieties of this interesting plant, over fifty being grown in North America. The general tobacco plant is a coarse annual, with simple stem, which often exceeds six feet in height and terminates in a panicle of pink flowers. Much has been said and written about this, as some have termed it "weed". Many have warned about the harmfulness, others of the solace: however, we might say that the abuse of a remedial agent does not abrogate the use of it. We can not refrain from saying that the disuse of tobacco would be the best for all mankind.

Tattooing has been urged by some as a distinctive way to identify any one collapsing from diabetes, epilepsy, heart attack or on the battle field; also a warning code may be tattooed on the body as to any allergic condition, et cetera.

At the convention of the American Veterinary Association in Indianapolis recently, the "horse doctor" got some deserved tribute from a human doctor. More than half of all human diseases, pointed out Dr. Thurman B. Rice, of the Indiana State Board of Health, are also diseases of animals. The M.D. must depend on the veterinarian to keep check on those diseases and prevent their transmission, through such vehicles as contaminated food, to the human consumer.

The veterinarian has his hospital, clinic and is prepared to administer toxins, operate and to do "what have you."

Their services to the state and nation as well as locally are invaluable, and they are ready to render any aid to their friends of the medical profession.

The DeSoto County Health Department has spacious and convenient quarters in the artistic and newly constructed court house. It has necessary apparati and equipment in general to take care of the appointments of the office.

Dr. Arthur Vandergrift and his associates likewise are aware of the needs of their department and they have been diligent in their duties.

L. L. Minor, Editor.

Rt. 4, Memphis, Tenn.
August. 19, 1941.

Woman's Auxiliary
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NORTHEAST THIRTEEN COUNTIES MEETING

The ladies of the Northeast Thirteen Counties Auxiliary gathered at the home of Mrs. M. S. Dixon in Aberdeen, September 9, while their husbands attended the scientific meeting. Welcomed by the doctors' wives of Monroe County, the visitors found the afternoon one of unusual pleasure. Cut flowers used extravagantly about the reception suite added to the importance of the occasion, and a program of music rendered by Mrs. Frank Gillespie highlighted the social hour.

The business session, presided over by Mrs. V. B. Philpot in the absence of Mrs. Robert Christian, president, considered messages from the national president and BULLETIN chairman. HYGEIA was stressed, and the secretary was directed to express appreciation to Dr. Guyton, of Blue Mountain, for his recent eulogy to the doctor's wife.

Delicious refreshments were served by the hostesses.

FOUR-COUNTY AUXILIARY

A delightful meeting of the Four-County Unit to the Northeast Mississippi Thirteen Counties Auxiliary was held September 2 in Fulton at the home of Mrs. W. L. Orr. The ladies were welcomed by their hostess and invited into the living-room, where a wealth of mid-summer flowers added grace and charm to the setting. There was little of importance for the business session, and the group spent the afternoon chatting informally and enjoying the hospitality of the hostess.

A collation of dainty sandwiches and toothsome sweets, served with iced tea, regaled the guests at the close of the meeting.

FACTS CONCERNING HYGEIA

Our HYGEIA Chairman, Mrs. Stanley Hill, has sent letters of reminder to the auxiliaries over the state, urging members to increase the present circulation. She has set a goal to *double* the number of HYGEIAS coming to Mississippi. Won't local chairmen coöperate by striving for 100% placements with beauty shops, schools and doctor's offices? These waiting rooms will reach scores of readers who would scarcely see a copy of it elsewhere.

The following terse facts may also be used to advantage in local newspapers, and editors might even help out if they too were better enlightened as to its mission.

Its Aims and Purposes

1. To supply its many subscribers in their wide fields of endeavor with reliable, informative material concerning health

2. To interpret scientific medicine to the public in simple non-technical language.

3. To flay the quack who undermines the mental and physical health of the public.

4. To discourage self-medication and morbidity to its lowest possible level.

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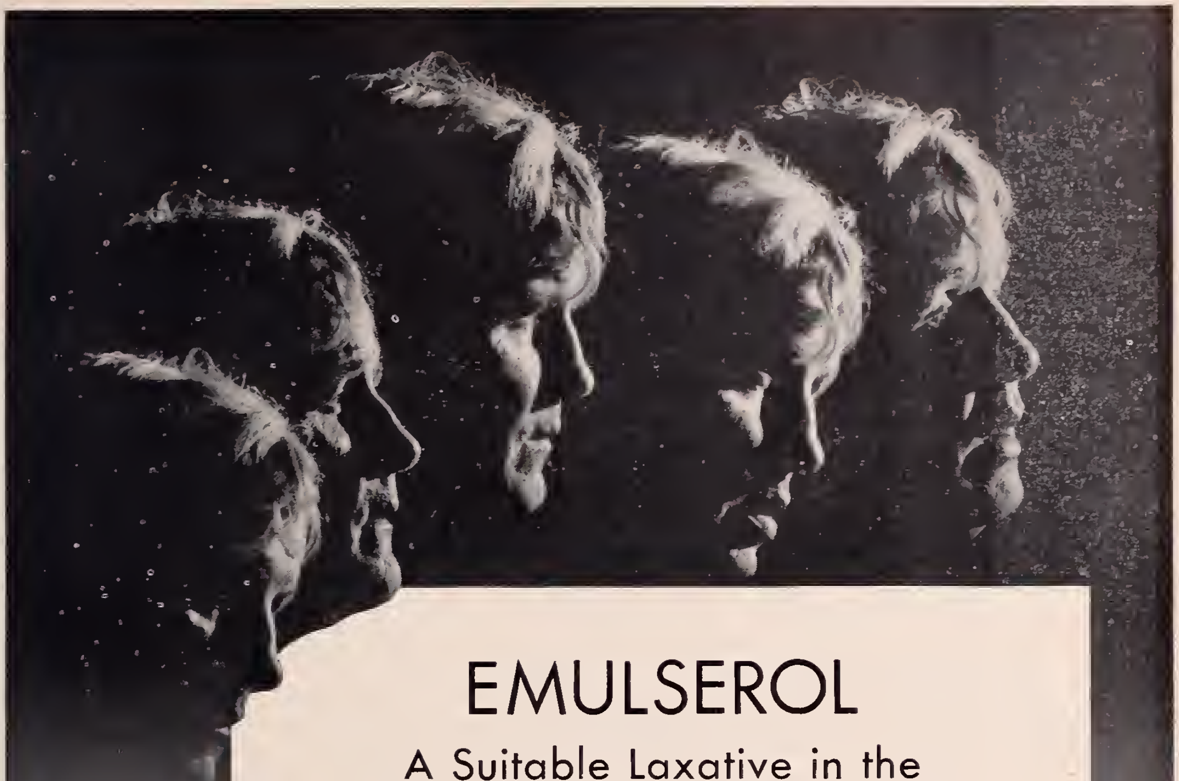
10. HYGEIA is the medium of conveying to the people who are not patients of the medical profession, scientific information concerning the prevention of disease.
11. HYGEIA is a clearing house for health news and views and health activity in all parts of the world.
12. HYGEIA gives health information, but each article emphasizes the intrinsic value of YOUR FAMILY PHYSICIAN.

SEND THEM IN!

This section wants an account of all auxiliary meetings. And especially does it need the new activities and projects of the various organizations. Other groups in other states find in these endeavors suggestions for their own calendar.



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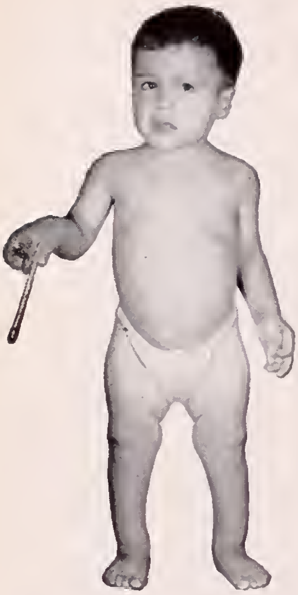
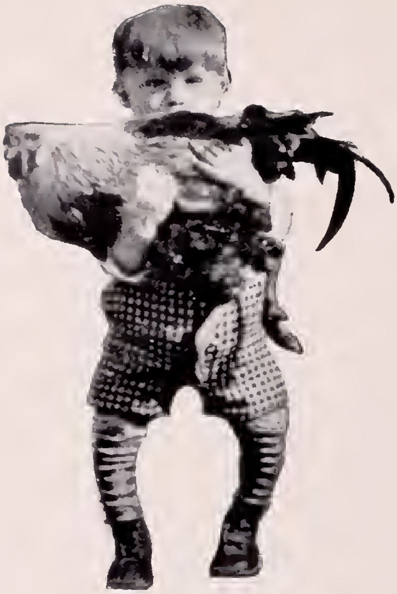
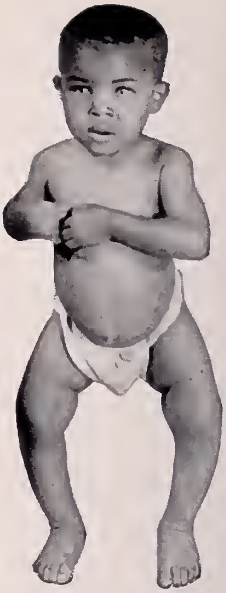

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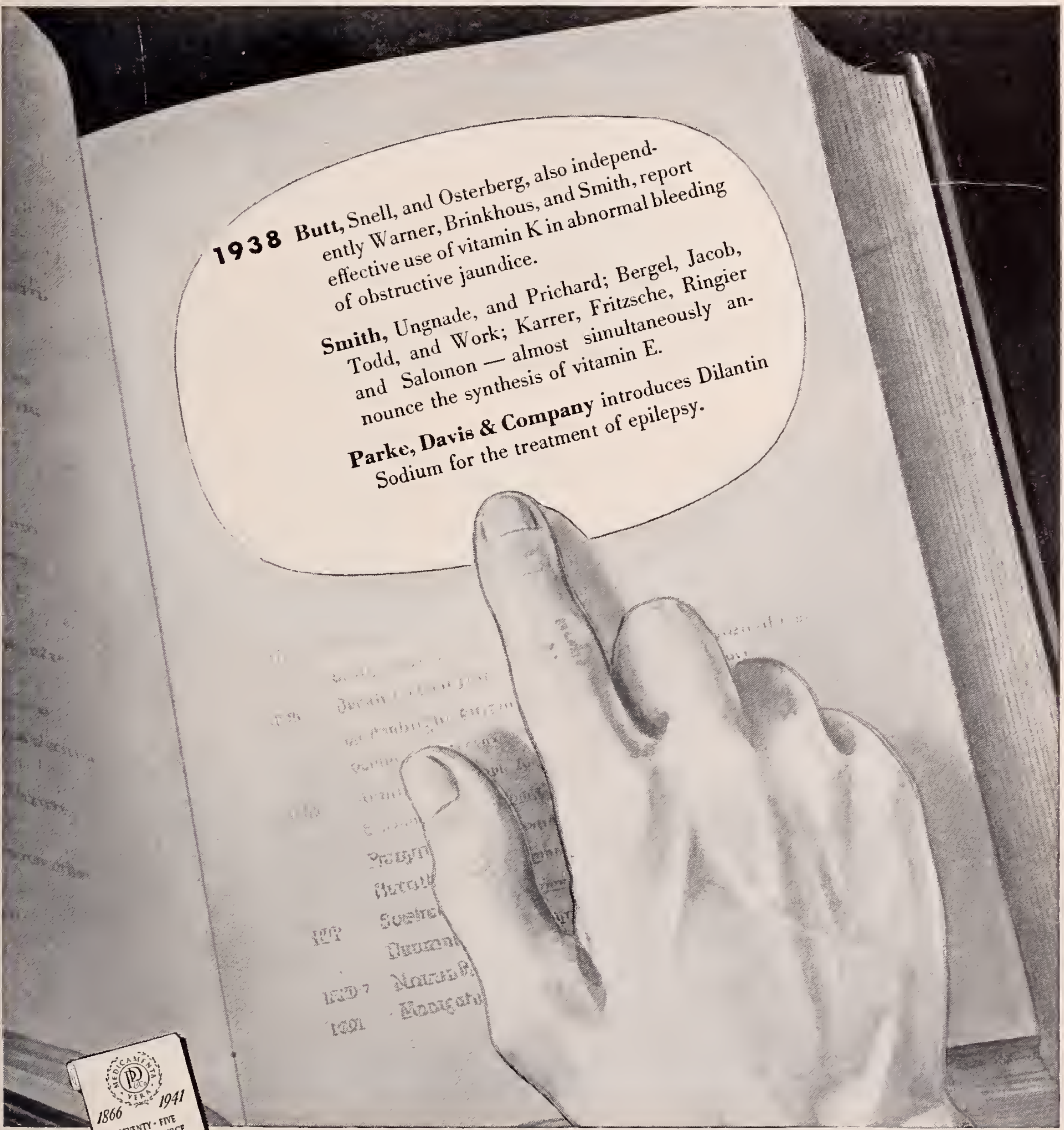

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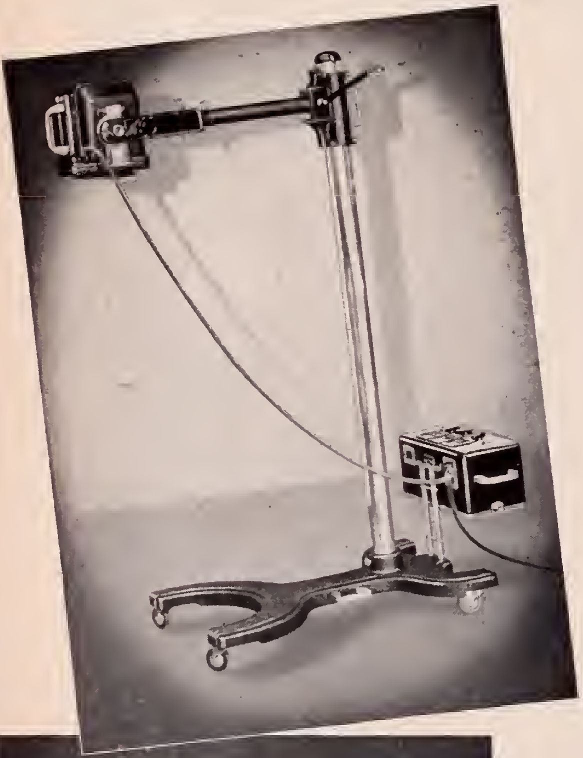

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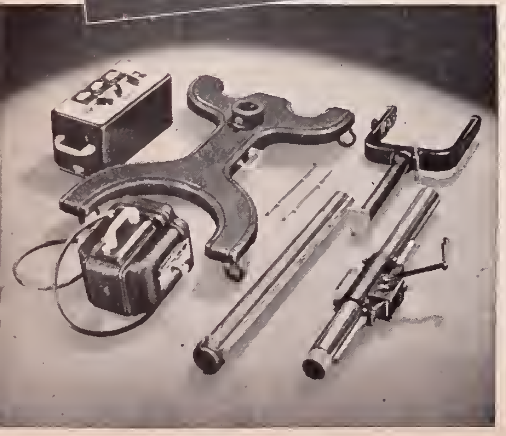

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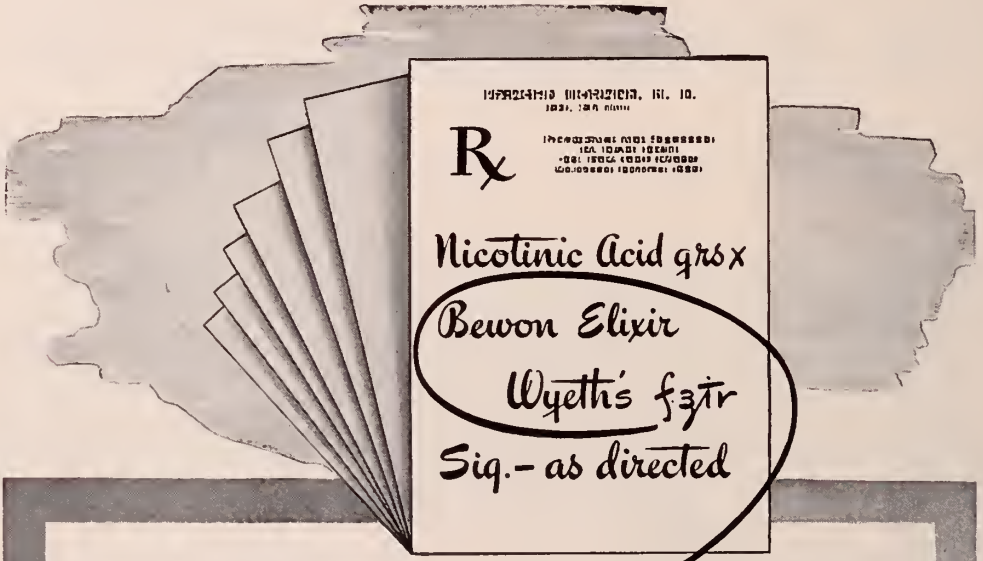
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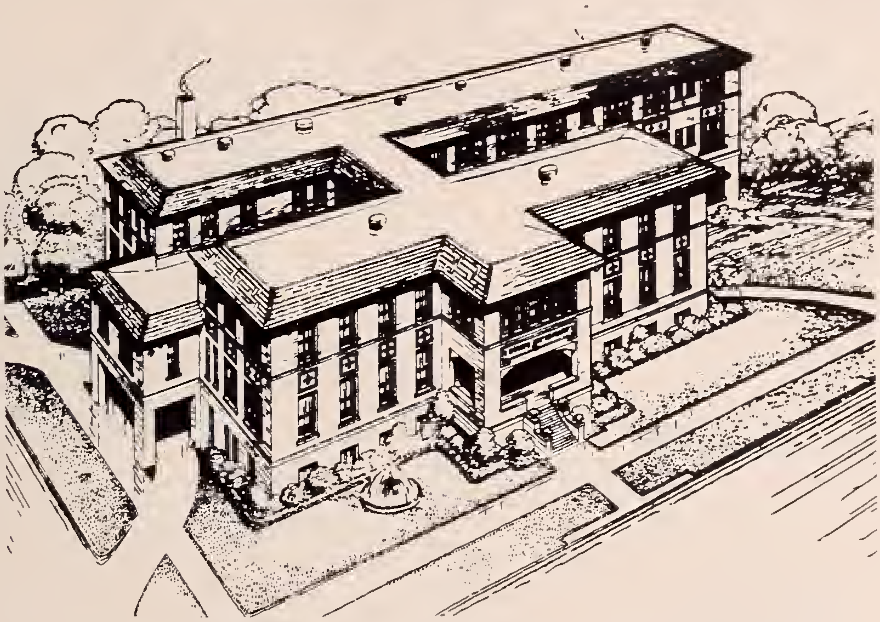

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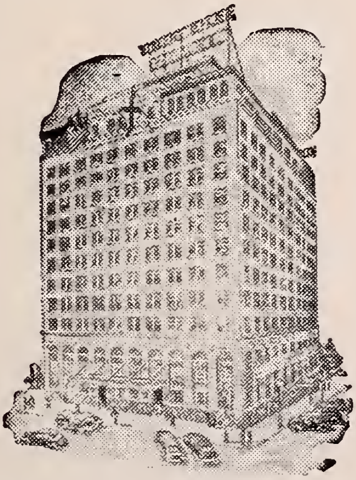

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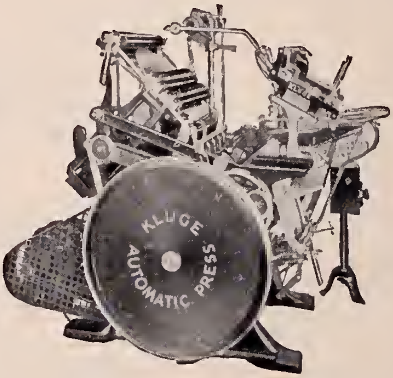

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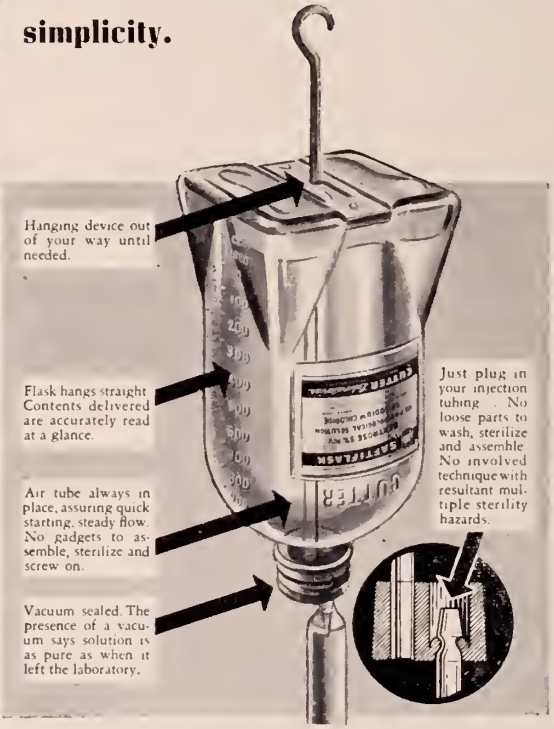

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The Asthmatic Child* **

BRET RATNER, M.D., F.A.A.P.
Clinical Professor of Pediatrics, N. Y. U. College of Medicine
NEW YORK, N. Y.

YOUR CHAIRMAN stated that there is nothing quite so distressing as being confronted with a child in the throes of an asthmatic attack. This we are all keenly conscious of and I hope that in my humble way I may offer a few suggestions that will clarify some of the problems involved. I regret that I cannot go deeply into the many phases of the subject here but I shall try to draw a picture which may be helpful in arriving at an intelligent clinical approach to the treatment of this type of child.

ONSET OF ASTHMA

In a previous paper[1] I went into a detailed analysis of the onset of allergy in childhood. In it I showed that asthma may have its onset at any time during childhood. However, very few cases appear to start in the first year; the largest number of children date their first definite symptoms of dyspnea from the third to the fourth year. The age of onset of eczema, however, is considerably earlier than that of asthma, and, in many instances, it is the forerunner of this disease. After early infancy asthma becomes the prevailing allergic syndrome, and wherever there is a multiplicity of allergic syndromes, it is generally one of the complicating conditions. Asthma was also found to be the dominant manifestation in the allergic antecedents of the children studied. It would appear therefore that the lung structure is phylogenetically predisposed to sensitization in the human species as it is in the guinea pig.

SENSITIVITIES

Although food sensitivities play a very important role in the allergy of childhood, inhalants and contactants play an equally important one. Throughout infancy and childhood reactions to foods and inhalants and contactants run a parallel course. There are many infants and children who react to pollens who do not suffer from hay fever. The pollens may be contributing factors in the eczema or asthma, or they may be potential sensitizers which eventually cause the onset of hay fever. The preponderance of multiple reactivities would suggest that specific therapeutic measures may fail if all the offending factors are not taken into account. It is for this reason that every child, if studied, should be tested with all available proteins.

I prefer to use the scratch test with children because it is painless, and as many as 35 to 50 tests can be performed at one visit. The back is the test area of my choice. No patient has ever been known to develop anaphylactic shock from a scratch test; but this cannot be said with the same degree of assurance of the intracutaneous test. Instances have been reported—or, more often passed by word of mouth—of severe shock and even death occurring from the latter diagnostic procedure. I believe such occurrences are entirely unnecessary. The scratch test performed and interpreted intelligently is far more delicate and fewer false reactions are obtained. I have often wondered if 30 or 40 per cent of the intracutaneous reactions are false positive ones, as is so often stated, how the interpreter can differentiate the true positive from the false.

Coupled with the scratch test performed with upwards of 200 various prepared dried proteins, it has been my custom for many years to test with substances obtained from the patient's direct environment.

DIRECT ENVIRONMENTAL SAMPLE TEST

This test I regard as of as great significance as any that has thus far been utilized in the study of the allergic child. Samples are obtained from the patient's immediate environment, including, for example, the stuffings of his own and other pillows, mattresses, furniture, toys, and dusts from rugs, draperies and other dust-producing articles. We request that small samples be gathered, each to be placed in an individual envelope, with the source carefully labelled. Each sample is then analyzed, macroscopically and microscopically when necessary, and the flame test applied to determine whether it contains organic or inorganic matter. The samples are then carefully tabulated and given serial numbers. Each sample is next cut up fine, placed in a numbered test tube and moistened with tenth or hundredth normal sodium hydroxide and placed in the refrigerator over night. The following day, scratch tests are performed on the patient's back, the wet material is removed at the end of 10 to 15 minutes and the reactions then read in the usual manner. The reactions obtained are for the most part persistent erythemas, though at times typical urticarial wheals appear. The skin is then carefully cleansed, the areas touched up with tincture of iodine, and boric acid ointment applied.

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*Address presented before the fifty-sixth annual session of the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 13, 1941.

**From the Department of Pediatrics, N. Y. U. College of Medicine, and the Children's Medical Division, Bellevue Hospital, New York.

This direct sample test is in most essentials similar to the first skin test applied by Blackley in 1873; Blackley, however, did not soak his material over night; his scratch was very large, while ours never exceeds 2 or 3 mm.; and we do not draw blood. Blackley applied a covering similar to the present patch test; we do not. The virtue of our test lies in the fact that materials indigenous to the patient's own environment are utilized. It has been shown that environmental substances which are old (aged)acquire antigenic properties not present in new material. Thus, old cotton linters or old feathers will produce reactions in cases that do not react to new cotton or feathers.

I cannot present as much data as I should like because of the limitation of time, but I shall cite one case which will help to emphasize the value of this test. A child of ten years who suffered solely from asthma was tested by no fewer than three allergists, by the intracutaneous method, and gave no reactions to any of the proteins with which he was tested. When this patient came to me I was warned that I would get no reactions and little did I expect them by the use of the scratch method, in the light of the absence of reactions with the intracutaneous method. My tests—three hundred of them—as had been predicted were all negative, and it must be remembered that these included cottonseed, feathers and other inhalant allergens. The mother of the boy then collected approximately 100 samples. We obtained 32 positive reactions. Our next step was to investigate the home and we found the majority of articles, samples of which provoked reactions, contained cotton linters and kapok, and some feathers. A careful recovering of the offending object with down-proof Egyptian cotton, or the removal of others where deemed more practical, resulted in a most dramatic cessation of the asthma; the boy has been followed now for many years. In this case then it was only through the use of the "direct sample test" that the situation was clarified. Had we depended solely upon the prepared proteins used either by the scratch or intracutaneous procedure we would undoubtedly have failed just as did the physicians previously consulted.

I have stressed the direct sample tests because as far as I am aware its importance is not fully appreciated.

OTHER DIAGNOSTIC AND THERAPEUTIC CONSIDERATIONS

Skin testing is not the sole diagnostic procedure essential for the proper appraisal of all the factors involved in this complicated problem.

A history of all the circumstances surrounding the disease is of importance. Information regarding other types of allergic manifestations help to fortify the early diagnosis of asthma. Above all, repeated episodes of respiratory difficulties with or without temperature always must make one wary of allergy. One of the most interesting experiences I have had in the past few years was to discover after careful questioning that certain cases, with a history of winter colds, during August and September have what the mother calls either cold or bronchitis. These children at times give no other reaction than to ragweed pollen. When perennial treatment for pollinosis is instituted the fall and winter colds are reduced or do not occur.

The blood should be investigated for eosinophilia, leucopenia and anemia. The blood chemistry as a rule shows no change.

Every child must be appraised from a growth-nutritional standpoint. His height-weight ratio coupled with a careful analysis of his growth pattern will suggest adjuvant therapeutic measures. Thus, if a child is anemic, underweight and under-sized and shows evidence of a delayed bony physiological growth, it is foolhardy for the physician to think that such a patient can be treated successfully solely from the standpoint of his allergy. Such a child should have (1) a great deal of rest; (2) a well balanced diet; (3) some form of iron, preferably ferrous sulphate (15 to 20 grs. a day, Feosol in tablet or liquid form); (4) a full quota of added vitamins; my choice would usually be Mead's ascorbic acid (25 to 50 mgms. a day), Mead's yeast tablet (1 to 3 a day), oleopercomorphum (10 to 20 drops a day); (5) thyroid judiciously administered, depending on the amount of delay in bone growth or evidence of a lowered basal metabolic rate in children over 10 or 12 years. One particular brand of thyroid should be prescribed to be obtained from a pharmacist who has fresh material in stock. The child must be observed regularly if thyroid is prescribed. The dose is regulated according to pulse rate and weight. I usually start with gr. ¼ and increase gradually to gr. 1½. It is a very fascinating commentary that an under-par child who is short and underweight will manifest an increase in both weight and height. I regard the weight as an important criterion; if a child is gaining on thyroid, continue its use; if he loses weight it should be discontinued. It can be tried again at a later period. Even with children who are thriving it is wise to stop thyroid medication intermittently.

SPECIFIC ALLERGIC TREATMENT

The treatment of the specific allergenic sensitivities must be approached from a long range point of view. It is not enough to do the tests, advise elimination of the offending substances, and let it go at that. Although a brilliant result might occasionally be achieved by this method such is not always to be expected. For example, if an individual is found sensitive only to cat or some other animal dander or reacts to fish or egg, elimination of these specific substances may be all that is necessary. On the other hand let us consider the child who is sensitive to milk, egg, wheat, several environmental substances and one or two pollens. Such a case is so complicated that unless a program is instituted that will encompass all of the phases it is better that no tests at all were done. In my experience, really good results become evident in such complicated cases only after several years of treatment—even though some benefits are perceived early in the course of treatment.

Although I cannot go into complete detail as to the management of just such a case, (and cases with multiple sensitivities probably comprise the largest number), the following is a general picture of the procedure.

FOOD SENSITIVITIES

All the offending foods must be eliminated from the diet in their raw state and given only in an "allergenically denatured form."[2]

MILK: (a) Eliminate raw milk, pasteurized milk, buttermilk, dry milks, cream, butter, ice cream, cream sauces, bread, cake, puddings, etc.

(b) Substitute evaporated milk or soya bean preparations, both for the purpose of a beverage and in the preparation of food.

EGG: (a) Eliminate raw or lightly cooked eggs, cakes, ice cream, glazed breads, puddings, icings, sherbets, certain baking powders, mayonnaise, etc.

(b) Substitute hard boiled (30 minutes) eggs, home-made ice creams, puddings, etc. to make certain that no eggs have gone into their preparation.

(c) In certain cases where the patient is super-hypersensitive it may be necessary to eliminate eggs from general household use altogether. There appears to be a tendency to contaminate foods and utensils with raw egg white (which clings to fingers tenaciously) if it is used in the cuisine at all. It may therefore be important occasionally to forbid the use of egg entirely.

WHEAT: (a) Eliminate bread—white and rye—cakes, puddings, cream sauces, etc.

(b) Substitute thin melba toast, rye krisp, pablum, etc.

Even from this very brief resumé it can be seen how complicated the elimination process is.

After elimination has produced results, the offending raw food may be introduced in minute quantity, and if well borne it may be continued in small doses to build up tolerance.

In Table I is a tentative list of allergenic and non-allergenic foods we have thus far worked out experimentally. We have learned that most fishes, nuts and condiments retain allergenic properties despite cooking, and we recommend therefore that they be excluded.

TABLE I. (3)

Allergenic Foods	*Allergenically Denatured Foods*
Raw Milk, casein	Freshly heated evaporated milk
Milk boiled for a few minutes	Freshly heated S. M. A.
Pasteurized milk	Milk boiled for several hours
Acidified milk	Freshly heated acidified evaporated milk
Dry milk	Thoroughly cooked beef and other meats
Malted milks	Beef broths and other meat broths and soups
Cream cheese, cottage, farmer	Egg boiled for 30 minutes
Cream sauces	Dextrimaltose
Cream	Corn syrup
Butter	Cane sugar
Beef serum, rare meats	Thin melba toast
Eggs—raw, soft-boiled, coddled, fried, scrambled, and poached	Precooked wheat
All malt extracts	Prolonged cooked cereal
Malt brews	Spaghetti and macaroni cooked
Wheat—raw, white bread, rye, pumpernickel, ordinary toast	Multiple precooked dry cereal (pablum, precooked corn cereals, popcorn)
Pastries, pie crust, all cakes	Precooked rice cereals
Pancakes and waffles	Thoroughly cooked fruits, jams, and jellies
Crackers, all cookies, pretzels, matzoth	Thoroughly cooked vegetables
Cooked corn meal, canned corn, corn on cob, cornstarch pudding, corn bread	
Rice and corn fritters	
Oatmeal	
Soybean	
Fresh fruits and juices	
All fresh vegetables	
Condiments	
Nuts	
Chocolate	
Fish	

Environment: (a) Animals should be removed.

(b) All dust producing articles should be eliminated as far as possible, including stuffed toys.

(c) All pillows and mattresses that are retained should be covered with some impervious material, e. g. down-proof Egyptian cotton. The rubberized materials available on the market have a tendency to produce sweating, and in addition are very expensive.

(d) Overstuffed furniture, if not eliminated, should be covered, and the bottoms especially thoroughly "sealed." The "day bed" is a particularly troublesome article and is usually found as an extra bed in the child's nursery. It is preferable to have open springs rather than the box spring. The horse hair mattress is the one of choice.

Immunization against the enviromental substances is not always effective, and for the most part I do not advise it. It is far better, in my estimation, to reduce the contact in the home and to permit a moderate amount of contact outside of the home; in this way the child will gradually build up an immunity in a natural manner.

Pollen therapy: Pollen therapy must be continued for several years, throughout the year—so-called *perennial* treatment. With children it is best to use extremely small doses. The doses are graded by the degree of local reaction. In other words, if a definite local reaction follows an injection, it is wise to maintain the same dose for the ensuing injection, or even reduce it. As the same doses are repeated the individual develops an increasing immunity response to them. Thus if 0.1 cc. of a 1-10,000 dilution is repeated ten times at weekly intervals, the tenth injection will produce an immunity response considerably higher than the first injection, either through the neutralization of antibodies or the development of a higher titer of humoral antibodies. The repeated doses are given every two weeks during the fall and winter; starting in the spring, or earlier depending on the type of pollen sensitivity, then, every week and twice a week or oftener about 6 weeks prior to the onset of pollinosis. During the season the dose should be markedly reduced, and given intracutaneously. Each case is a law unto itself; I would only ask that small doses be given and increases be made slowly.

Vaccine therapy: For the enhancement of

the general immunity response of the patient it is of inestimable value to inject small doses of stock vaccines including a large variety of bacteria. These injections can be given at weekly or bi-weekly intervals. Here too the caution with respect to large reactions must be observed. The *anamnestic reaction* then gathers full momentum and the allergic child after a period of such treatment develops an immunity in the same way that the high degree of natural immunity to diphtheria and other contagious diseases is developed in those who live in crowded sections and have subclinical contacts.

FOLLOW-UP

In the complicated cases where the physician in charge appears to make no headway despite careful observance of directions detailed, he may deem it necessary to refer the patient to the trained allergist for a comprehensive "work-up." Such an intensive study can rarely be achieved in less than two to three weeks. A program is then mapped out. Monthly reports, or better still monthly visits to the allergist, enable the consultant to check up all factors continually and to analyze each asthmatic episode. In the interim the physician in charge carries on, noting any untoward reactions. Complete retesting may occasionally be necessary. Good results often are immediate, but at times several months or even a year may elapse before they are achieved. The joint management of the allergic child by the trained pediatric allergist and the local physician is practicable.

SYMPTOMATIC THERAPY OF THE ASTHMATIC ATTACK

This particular phase of the problem is probably of the greatest interest to us as physicians because the anxiety and fear engendered in the parent and child by an attack of asthma places this disease far in the forefront of emergency practice.

Above all, a cheerful attitude should be maintained by all surrounding the patient. If the child is breathing forcefully and is not cyanosed there is little danger. The harder he breathes the better. If a child is cyanosed and has very shallow breathing or apneia, the situation is dangerous. If the sounds on auscultation are clear, loud and resonant, with sibilant and sonorous rales, the asthma is of no serious consequence. If auscultation discloses feeble sounds and there are moist rales the seriousness is real. If the rales break through after coughing it is indicative of bronchial plugging. Temperature may occur in the asthma of childhood; do not be misled and change the diagnosis to pneumonia.

General Directions: 1. Windows should be opened, unless it is very cold.

2. A soap-sud enema should be given.

3. If the child is not too sick, remove him from the bedroom to one of the other rooms. Sometimes when children are moved to another room, or while they are being transported to the hospital, the asthma clears up; this would indicate an environmental factor.

4. During an attack the patient is generally more comfortable if propped up or sat up in a chair.

5. If an electric fan is available, the cool breeze blowing directly on the face is comforting and rids the patient of the fear of suffocation.

6. Above all, the physician should remain composed.

Medication for simple attack: 1. Adrenalin (1-1000) 2 or 3 minims subcutaneously. This can be repeated intracutaneously several times at intervals of 15 to 30 minutes. If the asthma clears, you are dealing with a spasmodic bronchiolar spasm.

2. Follow with a sedative, phenobarbital, acetyl salicylic acid or triple bromides.

3. Ephedrine sulphate by mouth, gr. ¼, may be tried instead of adrenalin.

Medication for severe attack or status asthmaticus: Ingenuity and therapeutic prowess are necessary in the treatment of the case that resists the above treatment. Usually a case that does not respond fairly promptly may very well go on into *status asthmaticus* and keep on for days, in which instances adrenalin and ephedrine seem futile. My procedure for such severe cases is the following. If the child can be removed to a hospital it is to be preferred, but the treatment can be carried on in the home.

1. A slow drip intravenous infusion of 10 per cent or 15 per cent dextrose solution (300 cc. for young children and 500 to 1000 cc. for older children.) In this infusion 1 cc. of adrenalin, 1-1000, can be mixed, making a dilution of 1-300,000 to 1-1,000,000. The value of this lies in the reduction of the dehydration and relief of the edema.

2. While the drip infusion is being set up

the child should be given 1 to 2 teaspoonfuls of syrup of ipecac, or more, in warm water to make the child vomit. This is of great importance, for during the retching period a reverse peristalsis of the trachea, so-called "tracheal vomiting," may be set into motion and thus a plug of mucous may be released and the patient will snap right out of the severe asthmatic attack. If the first dose of ipecac is not effective, it is wise to repeat it. There is probably no more dramatic therapy outside of adrenalin. When one realizes that adrenalin is not effective in the particular case being treated and in which plugging of the bronchi is the main cause of the prolonged attack (as opposed to the spasmodic bronchiolar spasm which clears up with adrenalin), give ipecac. Forceful vomiting with a release of the plugs is followed by relief, so speedy, that the result is at times truly dramatic.

3. The child is then given a sedative by rectum, preferably bromides or chloral hydrate.

4. An electric fan is kept blowing gently in the patient's face.

5. If there is cyanosis, oxygen or preferably oxygen and helium, should be administered by nasal catheter.

6. Aminophyllin by intravenous injections may be of some value.

THERAPEUTIC DON'TS: 1 Large doses of adrenalin should never be used. The frantic repetition of ½ to 1 cc. of adrenalin is probably the most unwise procedure. It not only does not relieve the asthma but causes a greater spasm of the bronchioles and actually aggravates the asthma. It also causes cardiac syncope—vascular congestion, apprehension, increased pulse rate and pallor, and heightened blood pressure.

2. It is criminal to give morphine or its derivatives during an attack of asthma. Probably most deaths from asthma are directly attributable to too much adrenalin and the use of morphine.

3. Don't leave the patient in an apprehensive state. Do not omit adjuvant therapeutic measures. Do not omit some form of sedation. Do not permit the child to be left alone.

POST-ATTACK THERAPY: 1. A salt-free allergenically denatured diet should be given.

2. Give plenty of liquid, particularly the cola drinks and other sweet beverages.

3. Prescribe a high carbohydrate diet.

4. A prescription I am fond of after the attack is:

℞ Theobromine gr. ii
Ephedrine Sulphate. gr. 1/8
Atropine Sulphate. gr. 1/500
Phenobarbital gr. 1/16
Acetyl Salicylic acid gr. ii
M. & Ft. in capsules D. T. D. 50

If the child is over 8 or 10 years, 2 capsules at a time can be given; if it is an infant, ½ capsule. Following the subsidence of the attack, the dose can be repeated q. 2 h. for 5 doses; then q. 3 h. for 24 hours; and q. 4 h. for the next 24 hours.

5. Quiet and fresh air (electric fan in the room—no longer necessary on the face.)

6. Catharsis and enemata.

In closing I would like to state that because of the short time allotted I have been forced to omit much that might be interesting and useful. However, I hope that the remarks I have made may be some help to you in your care of the asthmatic child. Asthma is not a disease that should be treated solely from a symptomatic standpoint, for repeated attacks make one only too aware of the futility of such an approach. It is a physiological disturbance which can be mastered if thoroughness is the watchword. When the problem is finally solved there is a signal absence of residual pathology. The child who has no further attacks appears normal to all intents and purposes and stigmata of the disease are nowhere to be found, unless the condition becomes so chronic that emphysema and bronchiectasis remain as an aftermath. This state is more likely to occur in the adult than in the child. For this reason, and because we can accomplish so much prophylactically, it seems to me that the asthma of childhood should be of especial interest to the physician.

50 East 78th Street,
New York, N. Y.

REFERENCES

1. Ratner, Bret: Allergy in Childhood: III. Its onset and natural progress, J. A. M. A., 111:2345, (Dec. 24) 1938.

2. (a) Ratner, Bret and Gruehl, H. L.: Anaphylactogenic Properties of Milk: Immunochemistry of the purified proteins and antigenic changes resulting from heat and acidification, Am. J. Dis. Child., 49:287, (Feb.) 1935.

(b) Ratner, Bret and Gruehl, H. L.: Anaphylactogenic Properties of Malted Sugars and Corn Syrup, Ibid. 49:307, (Fef.) 1935.

(c) Ratner, Bret: The Treatment of Milk Allergy and Its Basic Principles, J. A. M. A., 105:934, (Sept. 21) 1935.
(d) Ratner, Bret and Gruehl, H. L.: Anaphylactogenic Properties of Certain Cereal Foods and Breadstuffs: Allergenic denaturation by heat, Am. Jr. Dis. Child., 57:739, (Apr.) 1939.
3. Ratner, Bret, Hill, Lewis Webb and Donally, Harry H: Round Table Discussion on Food Allergy in Children, Jr. Pediatrics, 16:653, (May) 1940.

The Cancer Problem Today*

JAMES T. NIX, M.D.
NEW ORLEANS, LA.

I FEEL IT A high privilege to be the out-of-state essayist at this assemblage of the Northeast Mississippi Thirteen Counties Medical Society, and the honor becomes especially appreciated as the meeting bears the name of a distinguished and beloved citizen, a brilliant scholar, and one of Mississippi's finest contributors to medicine—G. S. Bryan, of Amory.

A visit to Mississippi is like a homecoming to me—one filled with happy memories of childhood and summer vacations on the coast, one reminiscent of my first experiences as a doctor in the little town of Cude, Mississippi, and the Gulf Coast at Waveland. My first license to practice medicine was secured when I took the examination of the Mississippi State Board of Medical Examiners held in Jackson in May, 1907. Mississippi is the cradle of my professional life. I practiced here in your state only a short time but my affection for your people waxed stronger through the years and multiplied with each new friendship. Many of my dearest patients are natives of Mississippi; many of my most esteemed confreres, members of your association with whom my professional life has been closely and delightfully interwoven.

In neighbor states as throughout the whole medical world, the life of every doctor is interwoven with the life of every other doctor by those strong ties that bind members of the same race, the same religion, the same family. For medicine knows but one race, the race of mankind; it has but one common enemy—disease. It has one purpose—health of the human family. It has the same weapons—science and skill and steadfastness. Doctors, side by side, or far apart, internationally allied, fight the same ceaseless battle—in war as in peace. in China as in America, in Germany as in England—that men might live. What others ruthlessly cripple and destroy we attempt to salvage and save—human life.

Faced today with a multitude of health problems coming from the nation's enormous defense efforts, we in the profession, for the time being perhaps, have our attention distracted from the more humdrum aspects of civil life. There is, however, a phase of our daily practice with all the grim features of a modern military campaign. I refer to our fight against cancer, probably the most cruel and the most treacherous enemy of mankind. In dark secrecy its awful work begins, growing from within, and though the din of battle is muted it is none the less destructive. As spearheads and encircling movements proceed "according to plan" so much territory has been invaded by the time war is declared that only a major, mortal assault of great vigor can stem the advance. Even then the struggle has frequent reverses, appalling casualties, desperate rear guard action and unremitting toil and suffering. Deprived of our most important ally, the healing power of nature, we must watch in impotent consternation the awesome cavalcade of victims marching inexorably to their doom. In the United States alone the gaping maw gorges on one hundred fifty thousand lives annually.

In spite of these depressing facts, attempts at cancer control need not be shrouded in pessimism. The most melancholy aspects of the subject is our failure as a whole to take advantage of all the possibilities for effective treatment now available. The motto of the American Society for the Control of Cancer, which is, "Fight Cancer with Knowledge," is no idle phrase. A wealth of information is becoming increasingly available and results are showing steady improvement. It is my purpose to review with you tonight the newer reasons for facing the problem of cancer control with greater confidence.

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It is commonly argued, apparently with little logic, that failing to know the cause of cancer we can hardly hope to cure it. This argument ignores the fact that quinine and mercury were very efficacious against malaria and syphilis long before the etiology of these diseases was clarified. On the other hand, the bacterial nature of many diseases, such as tuberculosis, is well established but is of little help, because we lack a specific method of treatment. As regards cancer it is doubtful that a single cure will ever be discovered. Each malignant neoplasm seems to have a distinctive pathogenesis and the immediate cause may be as characteristic for each as the histologic features and the clinical course. Ewing says the cancer process is a disturbance of the intricate mechanism locked within the cell and, being an aberration of growth, there is little likelihood of our gaining an understanding of it unless we learn the nature of living processes themselves. This remains an attainment for the remote future.

Many agents of course have been found to provoke cancer under suitable conditions. Kenneway and Cook[1] with their work on carcinogenic sterols and related compounds have opened up lines of investigation of tremendous significance. This most likely has great potentialities for prevention rather than for cure. We have come to recognize many lesions, such as leukoplakia, that are common precursors of cancer and must therefore be eradicated. Occupational cancer, such as those of the bladder in aniline dye workers and of the hands of radiologists, is largely under control due to the institution of adequate preventive measures. Unfortunately, little has been revealed for the benefit of the patient with established cancer in its common clinical forms. We do not intend to belittle the value of fundamental research but it must be clearly recognized that for the present the laboratory has little to offer the clinician in the matter of prevention or specific therapy and that we must spend our efforts in perfecting empirical methods of treatment. This is slow and painful work but it is fruitful work. Ours therefore must be a realistic policy: doing the best with what we have until the day arrives when a specific remedy will heal disseminated cancer.

Under favorable conditions cancer can be cured by surgery, by radiation or by a combination of both methods. Even under adverse circumstances a great deal can be done for the patient by the judicious employment of such measures. In general, surgery remains the most effective single measure in the management of curable patients but, unfortunately, these are still in the minority and for that reason the bulk of the work falls to the lot of the radiologist who, more often than he likes, has to be satisfied simply with effecting some degree of palliation. I would like to emphasize that surgery and radiation are complementary rather than competitive method of treatment. There is no justification for any antagonism between radiologists and surgeons but on the contrary there is very great need for close coördination and the highest degree of coöperation. This idea is behind the plan endorsed by the American College of Surgeons for promoting the creation of tumor clinics in general hospitals throughout the United States. At Charity Hospital and at Hotel Dieu we have found consultation among members of the several specialties an essential for satisfactory results. It has become axiomatic that the greatest handicap to any form of treatment is delay in diagnosis. This delay is created principally by three factors: the insidious beginning of most cancers, neglect on the part of the patient and failure on the part of the examining physician to recognize the condition. There are many extenuating circumstances in the last two, but success in eliminating all three factors of delay is one of the most attractive possibilities in the entire field of cancer. It would cause a prodigious reduction in the morality figures for the entire group of diseases. Three measures have been suggested to accomplish such corrections. First the institution of routine, periodic physical examination in persons past middle age. This would permit the recognition of many early lesions before any symptoms have made their appearance. Second, a vigorous campaign for the education of the laity on signs that may mean cancer, such as has been waged for the past thirty years by the American Society for the Control of Cancer, by cancer research societies, by the cancer committee of the state medical societies and by the Women's

Field Army. These would impress the patient with the dangers of self-neglect. Third, the profession as a whole must become more alert and consider the possibility of cancer in the differential diagnosis of any complaint in a patient past middle age. The more obscure the symptoms the greater the urgency for establishing a diagnosis promptly. Remember the Spanish aphorism—*Diagnostico precoz, cura cierta.* When the clinical picture becomes classical the diagnosis is easy but the cure almost impossible. As Moynihan said, regarding cancer of the breast, "The certainty of diagnosis is the certainty of death." There is no time to discuss the many diagnostic refinements that have become available in recent years. However, it is good practice whenever a suspicious lesion is present to obtain a biopsy. There are a few contraindications to this dictum. In the event that the mass under suspicion should not be ulcerated, one can still obtain material by aspiration according to the technique of the Memorial Hospital group. This procedure has simplicity and speed to recommend it. The slides obtained by this method can be examined a few minutes after obtaining the material but they require the service of a competent pathologist because their interpretation is difficult.

Diagnosis in cancer work means more than the simple recognition of the presence of the malignant tumor. Diagnosis must bring about a clear definition of the therapeutic problem. Rational planning of the treatment requires knowledge of the histogenesis of the tumor, its degree of malignancy, the anatomic extent of the neoplasm, the presence of infection, the general condition of the patient and several other factors which will be mentioned in the discussion of the individual neoplasms. Undertaking the treatment of a cancer patient is a grave responsibility. If the first therapeutic attempt is not successful there is very little likelihood that anything more will be accomplished in a second trial. For this reason it is of vital importance that the first treatment be planned in accordance with the best knowledge available and ably carried out. This is especially true for the very early lesion. To temporize with half-hearted measures simply because the cancer is too incipient to have a menacing aspect is to deprive the patient of a cure when the most favorable circumstances obtain. In general, the earlier the lesion is recognized the more radical must be the treatment.

In the past ten years a large number of statistical reports have tended to clarify the effectiveness of surgery in practically every type of neoplasm occurring in the body. The range of operability has become much better defined and, in general, it may be said that the indications for very extensive operations have become restricted. Of the newer developments one can say that the last decade was characterized by the evolution of surgery of the lung and possibly of the esophagus and the cardiac end of the stomach, although to a much less extent, and by the demonstration of the feasibility of resection of the pancreas and duodenum by Whipple and others, of transthoracic gastrectomy by Sweet, and of the interscapular thoracic amputation by Pack, Coley and McNeer.[2] Total gastrectomy and total cystectomy have been tried with increasing frequency while surgery of the brain and the spinal cord was pursued with greater confidence and better results. The concept of operability has undergone a significant transformation. A lesion may be deemed inoperable on one of three counts: First, techincally inoperable lesions are those in which the lesion has spread beyond the confines of excisional surgery; second, a lesion may be clinically inoperable either because the patient's general condition or a complicating disease prohibits its surgical intervention or because the patient refuses to permit the operation required; third, a lesion may be biologically inoperable because its degree of malignancy, the rapid development of the tumor, offer little likelihood of control even by a very formidable procedure. An instance of this type would be a florid carcinoma in a lactating breast.

Carcinoma of the stomach is a malignant tumor with a high general incidence. Estimates of its frequency range from 20% to 33%. Pack and Livington have shown in their monograph on the subject that of every hundred patients with carcinoma of the stomach seen in any surgical clinic, on the average fifty are inoperable at the first visit and fifty are explored, of which only twenty-four are resected, resulting in three cures at the end of five years. Of the patients discharged from the hospital after resection, 25% uniformly survive for five years in good health, which means that if the patient is operated early surgery is highly successful. This illustrates the point that the outlook for the cancer patient is bad, not because our methods of treatment are inadequate but because diagnosis is delayed so long before treatment is instituted. Many incipient lesions will be recognized if we adopt the policy of considering every patient past middle life with gastric complaint of recent origin, even of the mildest type, to be a carcinoma of the stomach until it is definitely proved wrong. If the findings are inconclusive it is preferable to explore and find no pathology than to allow the lesion to proceed to the stage of inoperability while we are waiting for the diagnosis to become obvious. The average operative mortality in resected cases is 16%. In a few institutions with abundant material this has been reduced to as low as 5%. The mortality thus is no longer prohibitive if the patient is adequately prepared. Radiation can offer only limited palliation to the patient not suitable for surgery. Only about 5% of carcinomas of the stomach will respond well to radiation. Lesions of the fundus and the greater curvature are more likely to show a favorable response than those at the pylorus.

The patient with carcinoma of the colon has a much better outlook.Operability ranges around 70%. Operative mortality is lower and curability reaches a much higher level than for any other portion of the intestinal tract.

According to Rankin the operability of carcinoma of the colon when first seen is about 60%. The outlook for the patient suitable for a radical operation depends on the site of the lesion, the presence of node metastasis and the degree of malignancy of the tumor. Neoplasms of the right colon yield much better results than those located on the left and the outlook for the patient deteriorates as the degree of malignancy increases. Node involvement reduces the chances of the patient by about two-thirds. Rankin has reported 54% five-year cures for all types of carcinoma of the colon. Radiation has little to offer in the management of the patient with carcinoma of the colon. It is indicated only in the treatment of skin implants in the neighborhood of the operative scar resulting from some technical mishap at the time the colon is resected. It may be well to mention at this time the relationship of polyposis of the colon to carcinoma. Adenomatosis is a familial disease. As first pointed out by Cripps[3] in 1882, it seems to be well established that some polyps may undergo malignant degeneration as has been emphasized by Lockhart-Mummery[4] and others so that the treatment of polyposis is a prophylaxis against cancer. Surgery has made truly brilliant advances in the treatment of carcinoma of the rectum. For unselected cases the average curability has risen to 30% while special clinics have been able to report as high as 60% five-year control in unselected operative cases. Several well conceived radical operations have been advised and it is possible to suit the method to the necessities of the individual patient. By careful selection of the operation it is possible to secure a wide extirpation of the growth and of the tissues potentially involved without attaining a prohibitive mortality. As a matter of fact Lockhart-Mummery has reported a 5% mortality rate in a series comprising over a hundred patients. In some clinics x-ray therapy is used routinely prior to operation to reduce the size of the tumor, control bleeding, lessen infection and destroy the most malignant element in the neoplasm. In others it is employed only in patients at the borderline of operability. Except as an adjuvant, radiation cannot compare with radical surgery as a means of controlling carcinoma of the rectum in unselected material. Binkley,[5] however, has been able to report 50% five-year control in a group of thirty-six patients with early lesions who had refused surgery or who were in no condition to withstand a major operation. Radiation finds its principal field of usefulness in the management of carcinoma of the rectum as a means of obtaining palliation in the inoperable group of cases. Life is prolonged in a few patients but in the majority a remarkable degree of comfort is attained. This state of affairs is reversed in carcinoma of the anus where radiation has practically supplanted surgery. This is a squamous carcinoma and has a greater similarity to carcinoma of the skin than to carcinoma of the rectum. Metastasis to the groin, however, still remains in the domain of the surgeon.

There are numerous types of carcinoma of the breast, each with peculiar histologic features or differences in the clinical course. It has been pretty definitely shown, however, that the outlook for the patient depends principally on the anatomic extent of the disease.

For this reason, in speaking of the treatment of carcinoma of the breast, it seems best to define primarily the areas invaded by the disease and a very simple classification has been designed for this purpose. The lesions have been divided into three stages. Stage 1 includes tumors entirely confined to the breast. Stage 2 signifies extension to the axillary nodes. Stage 3 includes all in whom the disease has spread beyond the limits of a radical mastectomy, that is, with involvement of the supraclavicular nodes of the opposite side of the chest, or with skeletal or with visceral metastases. A classification based on purely clinical findings can of course be very misleading. Failure to palpate nodes in the axillary space does not preclude the possibility of finding metastases at the time the axillary dissection is performed. On the other hand, ability to palpate enlarged axillary nodes is not conclusive evidence of the spread of the cancer, since histologic examination may reveal only inflammatory changes. Final grouping of the cases therefore must depend on the findings in the material removed at the time of operation and prognosis can then be ascertained with greater certainty. Nevertheless the clinical set-up must be used as a rough guide in the planning of treatment and for that reason a classification is useful, provided its limitations are well understood. Certain lesions appear to be biologically inoperable. Inflammatory carcinoma of the breast or acute carcinosis of the breast is characterized by rapid development, the breast becoming swollen, edematous, with marked redness of the skin and definite elevation of the temperature of the breast, giving the impression of an inflammatory condition. These tumors are exceedingly malignant and are best handled by x-ray therapy alone. Carcinoma occurring during pregnancy or in a lactating breast is also very malignant and the tendency is to rely on radiation as the principal method of treatment. Radical mastectomy yields approximately 70% five-year cures in Stage 1 cases. There is no conclusive evidence to show that combination with x-ray or radium can improve on the figure. In Stage 2 cases the incidence of good results drops down to 23% on the average and here combination with x-ray or radium uniformly shows an improvement in the five-year results amounting to about 5%. This may not be very substantial in comparing the group as a whole. Actually it represents 20% improvement in the number of cures. Surgery is contraindicated in Stage 3 cases, except as a means of removing large, offensive, ulcerated growths. In a few institutions the radical operation has been attempted in the face of supraclavicular metastases. The operative mortality has been increased substantially and the proportion of cures attained has never exceeded 8%.

Turning now to the question of the role of radiation in the treatment of cancer of the breast it must be readily admitted that now more than ever confusion reigns as to its merits when compared with surgery, as to the best way of combining the two methods and as to the best method of obtaining its full benefit. It is beyond question that it is possible for radiation to cure cancer of the breast in all stages and in all types of the disease. The point at issue is whether or not it is sufficiently effective to replace surgery in the majority of the cases. The answer cannot be based on opinion or enthusiasm but on objective data. A review of these is not possible at this time but it can be conservatively concluded that radiation by the methods now employed cannot compete with surgery in Stage 1 cases. In Stage 2 cases, in the hands of some expert radiotherapists, it apparently provides an adequate substitute, while in Stage 3 it provides excellent palliation and in some cases yields brilliant cures. Geoffrey Keynes[6] has published results in over three hundred cases treated by radium alone, or radium combined with a simple excision of the tumor, with figures equaling or surpassing the results of surgery in every stage of the disease. Unfortunately, some of the cases had no histologic proof so we must await confirmation of his work before adopting it as a routine procedure. Furthermore, success with his methods depends on great skill and long experience. For these reasons, in the management of cancer of the breast, it would seem advisable to adopt the following plan: In clinical Stage 1 cases, radical mastectomy should be performed immediately unless the patient is still menstruating. In such cases the tumor is more likely to be very malignant and x-ray therapy of the breast and pelvis prior to surgery reduces the possibility of disseminating the disease by the trauma associated with mammectomy. This technique of preoperative x-ray therapy we call the short series. It delivers approximately 1000 r to each of five ports over the breast itself and the axilla and the dosage reached is not high enough to require delay in the operation. If the operation confirms the clinical impression that no axillary metastases are present, no additional treatment is indicated. If, however, nodes are found at the time of intervention, postoperative x-ray therapy should be given to the limit of tolerance of the skin and other normal tissues. In Stage 2 cases, a short series should precede operation which in turn must be followed by x-ray therapy to a high total dose. At the Memorial Hospital in New York for several years the plan of treatment followed consisted in giving the maximum proper amount of x-ray before operation. This necessitated postponing the operation from eight to ten weeks. Study of end results has shown that the incidence of cures is not improved, as compared to the combination of operation first followed by radiation. In Stage 3 cases, as in the treatment of recurrences following operation, radiation can accomplish more than excision; and in this group of cases, Keynes has reported 17% five-year cures and Pfahler,[7] approximately the same degree of salvage. It is worth emphasizing that skeletal metastases are particularly radio-sensitive and that the patient who is bedridden and suffering intensely from widespread bone involvement should not be given up as a hopeless case, but on the contrary should be treated vigorously with fairly good assurance that marked improvement will be obtained. We have seen pathologic fractures of the spine and of the hip heal under the judicious administration of x-ray therapy, with control of the disease lasting for years. From what has been said, it is apparent that there are no grounds for the belief that conservative measures, as available at present, can be substituted for radical operation. Especially reprehensible is the practice of performing local excision or simple mastectomy for small localized lesions in the breast. This robs the patient of at least half of her chances of getting well. This was demonstrated in Brooklyn where one hundred patients with Stage 1 carcinoma of the breast, treated by local mastectomy, gave only 42% five-year cures. The radical operation would have given approximately 70% cures. This policy cannot be excused on the grounds that the radical operation increases the mortality. This in good hands never exceeds 3% and, as a matter of fact, in most large institutions the loss is only 1%.

The gynecologist has seen most of the malignant neoplasms in his field come increasingly under the influence of the radiologist. In treating cancer of the cervix the goal is to combine x-ray and radium is such a way that tumors will be destroyed in the parametrium and pelvic wall as well as in the cervix itself. It has been very definitely shown by Lacassagne[8] that results even in the earliest lesions can be improved by combining x-ray and radium. The general curability of cancer of the cervix averages 35% for all stages of the disease according to the last reports of the League of Nations Committee. The extent of anatomic involvement determines to a large extent the success of the treatment. In Stage I cases, where the tumor seems to be confined to the cervix itself, cures have reached as high as 80% in large series. When the tumor has invaded the vaginal fornices or the parametria, the so-called Stage 2 cases, the incidence of cures has been 50% or better. In both these stages a Wertheim[9] operation is possible but the end results are not better and the operative mortality is at least seven times greater. In addition, radiation can yield cures even in advanced inoperable cases. Treatment is started with x-ray which is directed to the parametrium and the pelvic wall and not to the cervix itself; enough radiation is scattered to the cervix to cause shrinkage of the tumor, cessation of bleeding and improvement in the infection almost invariably associated with the disease. The factors employed are 200 kilovolts, ½ mm. of copper and 1 of aluminum filter, 70 cm. skin target distance, and six ports, two anterior, two lateral and two posterior. The treatment usually takes three weeks and delivers approximately one-half the lethal dose to the region of interest. 400 kilovolts and higher voltages have been employed more frequently in recent years but it remains to be definitely demonstrated that they yield superior results. Immediately following x-ray, radium is implanted, using foci both in the cervical canal and in the vaginal fornices. With adequate filtration and using the Curie Institute technique, six to eight thousand milligram hours are delivered in approximately five days. Following this plan of treatment no radiation is given again unless a recurrence appears.

Carcinoma of the vulva nevertheless remains strictly a surgical disease. Vulvectomy yields over 60% five-year cures and is combined with a Bassett [10] operation whenever inguinal metastases are present. Taussig's [11] work is outstanding in this field. Radiation is reserved for inoperable lesions or for patients who reject surgery. It is handicapped by the high radio resistance of these tumors and by the fact that the vulva tolerates radiation very poorly. Tumors of the ovaries are surgical problems, at least at the start. The difficulties in arriving at an accurate diagnosis are so great that an exploratory operation is almost invariably performed. If the tumor is removed, all pelvic organs should be removed at the same time since involvement of the opposite ovary is almost certain to follow. Postoperative x-ray therapy is indicated if the tumor ruptures, if the serious surface has papillomatous projections or if there is a seeding of the peritoneum. Since most tumors are extirpated little can be said of the sensitivity of the different types except that seminoma ovarii or embryonal carcinoma with lymphoid stroma has a high degree of radiosensitivity, comparable to that of lymphosarcoma.

In carcinoma of the corpus uteri total hysterectomy yields a very high proportion of cures. The results can be substantially improved by combining it with radiation. The plans of treatment would be implantation of radium in the uterine cavity at the time that the diagnostic dilatation and curettage is done for a dose of about four thousand milligram hours followed in six to eight weeks by total hysterectomy which in turn would be followed by x-ray therapy. With this plan Healy[12] reports 68% five-year cures. The inoperable case can be very efficiently handled by combining radium and x-ray therapy alone. The range of curability in such cases is about 21%.

In the field of the urologist nephrectomy remains the principal curative measure in carcinomas of the renal parenchyma and of the kidney pelvis. Waters [13] of Baltimore and others have shown that in the treatment of hypernephroma preoperative and postoperative radiation is of decided value. At the Mayo Clinic nephrectomy gave 40% five-year cures and x-ray therapy in inoperable cases gave 17% five-year cures.

A radical change has taken place in the outlook for the patient with teratoma testis. This used to be one of the most hopeless diseases, whereas now adequate x-ray therapy gives 60% to 70% five-year cures in patients who present themselves for treatment before metastases become apparent. The general average of cures for early and late cases is 28%. This advance has been made possible by planning the treatment to deliver radiation not only over the testicle but over the entire chain of lymphatics extending from the groin to the left supraclavicular region.

For carcinoma of the bladder Barringer and Dean [14] have reported 37% five-year controls, effected principally by the implantation of radon seeds in the bladder, either through the cystoscope or through a suprapubic wound, depending upon the circumstances of the individual case. This is somewhat better than the figures reported after resection of the bladder of fulguration of the tumor. Surgical resection is indicated in cancer of the vault and occasionally in cancer of the prostate. Fulguration is of decided benefit and often establishes a cure in single and multiple papillomas of the bladder. However, these cases must be recystoscoped at regular intervals of not longer than two or three months until the condition is controlled or cured.

In the treatment of osteogenic sarcoma the cardinal principle of treatment has been to operate immediately after the diagnosis is made. A. B. Ferguson[15] in an analysis of the cases in the bone tumor registry of the American College of Surgeons discovered the surprising fact that patients who are operated on within six months after the onset of symptoms did much worse than those in whom operation had been delayed longer. He concluded that this was probably due to the great momentum for growth in the tumor during the early stages of development and suggested that if it were possible to inactivate the tumor surgery would probably be more successful and advised the use of x-ray therapy before amputation was attempted. This line of reasoning has found confirmation in the work of Bradley Coley [16] who shows a 34% five year cure rate in a group of children that he had treated by amputation preceded by x-ray therapy. Higginbotham[17] and his co-workers have shown that the phosphatase level in the blood rises in the majority of osteogenic sarcomas. Determination of the phosphatase level during the course of x-ray therapy would give an indication as to the effect of radiation on the tumor and would permit us to decide on the optimum time for amputation, which would be indicated by a steady level of the phosphatase concentration after a drop following radiation. Radiation alone has been shown to yield only an occasional cure in patients with periostial sarcoma. Ewing's sarcoma, on the other hand, being exceedingly radiosensitive has been handled by a combination of radiation and surgery, the administration of x-ray preceding the operation. Of the other bone tumors, plasma cell myeloma, lymphosarcoma, liposarcoma and hemangioma are problems for radiation. Giant cell tumor has been handled successfully both by x-ray therapy and by curettement. As far as surgical management is concerned, Coley has shown that through curettement followed by cauterization with zinc chloride and closure of the wound without drainage gives the best results. Radiation alone should be given only in moderate doses, in order not to interfere with the healing tendency in bone and it should be borne in mind that for four to six weeks following x-ray treatment, clinically and radiographically the lesion appears to grow worse. This has been called the paradoxical reaction and should not mislead one not to persevere in the treatment. In a very small proportion of cases gaint cell tumors undergo malignant degeneration. This has been found to occur after repeated surgical intervention and in cases wherein radiation and curettage had been combined or used to excess.

Pneumonectomy and esophagectomy are on trial as means of controlling carcinoma of the lung and carcinoma of the esophagus, both highly fatal forms of cancer. Both procedures have a very high operative mortality, well above 50%, and no substantial number of cases has gone beyond five years to permit appraisal of the value of the operation. A few cases of carcinoma of the lung have gone symptom free for five years. Torek[18] has one such case of carcinoma of the esophagus. In both these lesions radiation has been a disappointment. It is handicapped by the radioresistance of the tumors and by the technical difficulties involved in attempting to deliver an adequate dosage. It is too soon to conclude, however, that radiation is of no value in either of these two conditions. As a matter of fact, the newer techniques hold promise of substantial benefits, and for carcinoma of the lung Craver[19] has already reported a 7% absolute cure rate, which may sound infinitesimally small unless we compare it witn tne absolute cure rate of carcinoma of the stomach by surgery which amounts to 3%, even after seventy years of experience with the technique of gastric resection.

Melanoma and soft tissue sarcomas, possibly with the exception of liposarcoma, are problems in surgical management. Biopsy is contra-indicated in melanoma. The primary lesion should be widely excised down to and including the fascia deep to the tumor. Conservation excision or electrocoagulation and electrodessication have no place in the treatment. The skin defect left after adequate excision usually requires skin grafting. Two or three weeks following removal of the primary a radical dissection should be performed on the regional lymph nodes whether they are palpable or not. Following this principle of treatment, Adair and Pack have shown a 22% five-year cure rate in operable cases which is surprisingly high and it is an exceedingly encouraging fact. Little palliation can be obtained by radiation as, according to these authors, only about 2½% of the lesions show any regression under treatment. Indeed the uniform radioresistance exhibited by melanoma has been adduced as additional proof of the neurogenic derivation of these tumors as indicated by the work of Masson[20].

It is obvious that on the average, the results reported by the radiologist in the treatment of a given group of cases are necessarily going to be poorer than in a group of cases treated by the surgeon since the quality of the material that he treats is much inferior. Statistics can be manipulated to prove that radiation is better than surgery or vice versa. Our interest does not lie in this direction. We must seek to determine in an impartial manner the methods best suited to the handling of certain types of lesions regardless of the specialty that seems to be favored.

Radiation therapy has made tremendous strides in the past ten years. The work has been carried on with remarkable perseverance in a few large centers. Progress has been made possible by perfection of the technical equipment, better understanding of the dosage requirements and a greater knowledge of the clinical response of tumors under treatment.

This information has not become as widely disseminated as it should and for the present the actual practice of radiotherapy has not attained the general excellence that surgery can now boast. The technique of radiotherapy is deceptively simple. It is commonly supposed that purchase of the necessary equipment with a book of instructions should enable any physician to approach the results reported by the large institutions. Of course such is not the case. Cancer is not a routine problem suitable for solution by a ready-made formula. A sound understanding of the physics of the agencies employed, of the clinical course of the disease and of radiobiology are essential for rational treatment by x-rays or radium.

In carcinomas of the skin no distinction in treatment is made between basal cell and squamous cell carcinoma. The treatment is modified in accordance with the location of the lesion, its dimensions, the structures it involves and the presence or absence of metastases. Stage I carcinomas involve only the skin and subcutaneous tissue. Stage II infiltrate important neighboring structures, that is, bone or cartilage; and Stage III are those that show metastases. In Stage I lesions of the face 95% five-year cures have been obtained by single massive doses of low voltage, unfiltered x-ray. In larger Stage I and Stage II lesions it has been found advantageous to use repeated daily dosage and more penetrating x-rays. In lesions occurring in the hands, the soles of the feet, the skin of the shin and a few other locations, it has been found profitable to employ surgical excision since these areas do not tolerate the amount of treatment required to effect a cure. The general average of cures for skin cancer in all stages is 70%. Carcinoma of the lip yields about the same proportion of cures as carcinoma of the skin. Early lesions can be treated with a single dose of x-ray and more infiltrating ones by a combination of x-ray treatment and interstitial radium. When no nodes are present in the neck on admission, no prophylactic treatment is indicated as only about 10% of the patients develop metastases after the primary lesion in the lip has been under control. If the nodes are palpable and movable and the primary lesion has healed and was of low grade malignancy, neck dissection offers more than treatment by x-rays or radium. If the nodes have become attached to the skin or the deep structures, control is possible by very aggressive radiation but the outlook is bad, especially if infection is present.

Only small, low grade carcinomas of the tongue can be treated successfully by simple excision. The majority require combined treatment by intra-oral x-ray, that is, by x-ray treatments delivered through a cone placed inside of the mouth, followed by implantation of radium. The same thing applies to carcinomas of the floor of the mouth, carcinomas of the inner surfaces of the cheek and of the hard palate. It is worth pointing out that operable lesions in any of these locations are curable in over 50% of the cases by adequate radiation with a negligible operative mortality and without mutilation, while the general average of curability for carcinoma of the floor of the mouth and of the tongue in all stages of the disease is 25%, according to the figures published by Hays Martin[21]. In carcinomas of the tonsil, nasopharynx, hypopharynx and in extrinsic larynx, that is, in the portion of the larynx above the cords, the treatment of choice is by fractional x-ray therapy according to the method of Coutard[22] which gives an average of about 25% cures for tumors in these locations. The treatment of metastatic nodes of the neck or any of these lesions is a separate problem. When no nodes are palpable no prophylactic treatment, either by x-ray or neck dissection, is indicated. When nodes are palpable treatment must be decided in accordance with the criteria enunciated by James B. Duffy[23] of the Memorial Hospital. He states that a radical neck dissection is indicated. if the primary lesion is healed, if it is of low grade malignancy, if it is confined to one side of the midline, if the mestastatic nodes are unilateral, freely movable, on the same side as the primary lesion, confined to a single triangle of the neck, or at the most, the two adjacent triangles, and the general condition of the patients must be good. If all these criteria cannot be met, neck dissection is contra-indicated and treatment must be by a combination of x-ray therapy and radium implanted directly into the nodes.

The last group of cases include lymphomas and leukemias. These tumors are the most radiosensitive but are so malignant that control for five years or more is attained in less than 10% of the cases. Acute leukemias as a rule should not be treated. As radiation often exaggerates the bleeding tendency, hemorrhages may become uncontrollable and the patient may die more quickly than if no treatment is administered. In both lymphatic and myelogenous chronic leukemias the aim of treatment is not to reduce the blood count to a satisfactory level but to maintain the patient in a comfortable state. This may be accomplished by delivering very small doses in the neighborhood of 50 r over the spleen and long bones for myelogenous leukemia; and over the lymphatic nodes in lymphocytic leukemia. These small doses maintain the patient in good contition and, combined with general supportive measures, effect remarkable palliation and may control the disease for years. In generalized lymphosarcomatosis and generalized Hodgkin's disease the same plan of treatment is followed but the dosage is somewhat heavier. In either of these two conditions if the disease seems to be confined to a single glandular area it is justifiable to attempt complete destruction of the neoplasm by heavy dosage of the order attained in the treatment of carcinoma.

There are many other neoplasms which might be discussed but their incidence is too limited to warrant lengthy consideration at this time.

In conclusion I would like to state that much of the terror that cancer inspires would disappear if we were to take full advantage of all available knowledge in the treatment of every cancer case. Mortality rates in the last ten years do not reflect the advances claimed in the management of cancer because the fine results that science has made possible are for the most part realized only in the larger clinics where facilities have been available for many years. It should be possible to offer the same chance of cure to every patient with cancer in every community in the United States.

This paper represents opinions based on careful study and seven years of concentrated effort in the treatment of cancer at the Tumor Clinic of the New Orleans Charity Hospital. For constant, meticulous, and expert coöperation, I am indebted to Doctor Bjarne Pearson of the Department of Pathology of Lousiana State University, and to Doctor Manuel Garcia, Associate Radiologist and Radiotherapist of Charity Hospital. To the latter I am also indebted for much information secured in the preparation of this paper. Without this team the Cancer Clinic of Charity Hospital would have failed in its purpose.

I wish to express appreciation also to Doctor Cornelius Gorman, now Major Gorman in the U. S. Army, for six years of efficient, unfailing service on the staff of the New Orleans Charity Hospital and on the staff of the J. T. Nix Clinic. To the nurses and social workers of Charity Hospital, who have always measured up to the highest standards, I am very deeply grateful.

REFERENCES

1. Cook, Haselwood, Hewett, Hilger, Kenneway and Mayneord: Chemical Compound as Carcinogenic Agents, Second Int. Cong. of Scientific and Social Campaign against Cancer, Brussels, 1936. Rapports Vol. I, pp. 1-23.
2. Pack, Coley and McNeer: Interscapulothoracic Amputation, N. Y. Academy of Medicine, Surgical Section, Nov. 1938.
3. Cripps, W. H.: Two Cases of Disseminated Polypus of the Rectum, Tr. Path. Sec., London, 33: 165, 1882.
4. Lockhart-Mummery, J. P.: S. G. & O., 66:527, 1938.
5. Binkley, G. E.: Radiology, 31:724, 1938.
6. Keynes, G.: Ann, Surg., 106:619, 1938.
7. Pfahler, G. E., and Vastine, J. H.: Am. J. Roent., 33:41, 1935.
8. Lacassagne, A.: Radiology, 33:20, 1939.
9. Wertheim, S.: Arch. of Gynak., 61:627, 1900.
10. Bassett: Epithelioma du vulve, Rev. de Chir., 46:546, 1912.
11. Taussig, F. J. Obst. and Gyn., 31:746, 1936.
12. Healy, W. P., and Brown, R. L.: Am. J. Obst. and Gyn., 38:1, 1939.
13. Waters, C. A.: Year Book of Radiology, 1940, Special article.
14. Barringer, B. S.: S. G. & O., 70:598, Feb. 1940.
    Dean, A. L., and Balfour, J.: N. Y. State of Med., 40:1431, 1940.
15. Ferguson, A. B.: J. of Bone and Joint Surg., 22:92, 1940.
16. Coley, Bradley, and Pool, J.: Am. Surg., 112:1114, 1940.
17. Woodward, H. L., and Higginbotham, H. L.: Am. J. Cancer, 31:221, 1937.
18. Torek, F.: Arch. Surg., 10:353, 1925.
19. Craver, L. F.: Am. J. Roent. 43:469, 1940.
20. Masson, P.: Ann. d' Anat. pathol., 3:417 and 656, 1926.
21. Martin, Hays, and Sugarbaker, E.: S. G. & O., 71:347, Sept., 1940.
    Martin, Hays, and Blady, J.: Arch. Otolaryng. 32:692, 1940.
    Martin, Hays, et al: Arch. Surg., 41:888, 1940.
22. Coutard, H.: Am. J. Roent., 28:313, 1932.
23. Duffy, J. B.: S. G. & O., 71:664, Nov. 1940.

Acute Appendicitis In Pregnancy*

JOHN LUCIUS MCGEHEE, M.D.
Professor of Surgery, College of Medicine, University of Tennessee
MEMPHIS, TENN.

THE LATE John B. Murphy never remained silent when any variety of appendicitis was being discussed. On the solid rock of immediate operation in acute appendicitis he took his stand and never in the course of his long and active career did he waver in the slightest degree from that position. He was just as positive in his convictions about appendicitis in pregnancy as about appendicitis at any other time. In 1912, in discussing a paper by Palmer Findley on "Appendicitis in Pregnancy," he made the unqualified statement, "There is *never an excuse for delaying* surgery in pregnancy, on the ground that if there is one thing that the surgeon of experience has concluded it is that he does not know what is going to happen in the ten, or the twenty, or the forty hours following the onset of acute appendicitis."

As a surgeon I subscribe in toto to this general principle. I have seen too many tragedies, I have personally participated in too many, not to have a deep-seated fear of what an hour, much less ten or twenty hours, may bring to pass when one is dealing with this most treacherous of all abdominal diseases, and I cannot see that its association with pregnancy alters the situation in any degree. In fact, *I am constrained to believe that its association with pregnancy increases the hazard and adds materially to the gravity of the risk and demands more prompt surgical action than in the non-pregnant woman.* Appendicitis in the pregnant woman is still appendicitis and the first indication in it, as the late W. W. Keen said many years ago, "is to call a surgeon, for it is absolutely impossible in any case in the beginning for any medical man, however gifted he may be, to foretell whether the acute process will subside promptly or whether it will progress to the stage when no treatment is of avail."

The mortality of appendicitis in the pregnant woman is the mortality of delay. This is equally true of the mortality in the non-pregnant. However, some medical men in this day and age consider the pregnant state an additional excuse to procrastinate and practice what they are pleased to call "watchful waiting." This is a reassuring term and pleases the patient but, like the paths of glory, such an attitude leads to the grave. *I subscribe to the view that the pregnant woman with acute appendicitis is a surgical problem first and an obstetrical problem second.* Once the diagnosis is made, or even strongly suspected, immediate operation should be the rule.

After these generalities, let us consider the pregnant woman with her altered abdominal relations and altered constitutional state, the victim of appendicitis:

As to the type called chronic appendicitis: It is beyond question that the woman who has once had appendicitis, the so-called chronic or recurrent disease, is very likely to develop it again during her pregnancy, often with very much graver results. Practically 50% of all reported cases developing acute appendicitis during pregnancy give a history of previous attacks. The explanation is simple: It has long been recognized that recurrent appendicitis is unfavorably influenced by *menstruation.* Since that is so, it is perfectly reasonable to assume that pregnancy, which introduces altered abdominal relations and altered constitutional states, should have an even more exciting effect upon the latent disease, while the constipation which is usual during pregnancy and the engorgement of the pelvic and hemorrhoidal veins which is physiologic also play their part.

That the appendix shares in the altered relations induced by pregnancy there can be no possible doubt. The radiologic studies of Baer, Ries and Arens, upon 78 patients, show definitely that it undergoes a progressive displacement upward after the third month and that it reaches the level of the iliac crest at the end of the sixth month. Since it also undergoes a counter-clockwise rotation, it is obvious that anatomic and physiologic rest are alike impossible. The situation is even more aggravated, as Kelly points out, if, as a result of previous inflammatory attacks, the appendix has become adherent to some one of the pelvic structures. Finally, the violent alterations which occur during labor and immediately after delivery necessarily have a deleterious effect on pre-existing disease. *The recurrence of previous appendicitis in pregnancy is so well established that some writers have gone so far as to suggest the propriety of a prophylactic appendectomy upon all married women in the childbearing years.* We should hesitate to countenance so extreme a proposal, *but it does seem the part of wisdom to perform an interval appendectomy without undue delay upon every woman who is the subject of chronic recurring appendicitis, who finds herself pregnant.*

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*Read before the Staff of the North Mississippi Community Hospital, Tupelo, Miss. July 14, 1941.

As to acute appendicitis: Since appendicitis is preeminently a disease of the childbearing years, and since gestation confers no immunity to it, it is not surprising that the pregnant woman should have it with more or less frequency, and Kelly is undoubtedly correct in his statement that the association of the two conditions is usually accidental The exact incidence is not a matter of moment: in the reported cases it varies from 17% as in the report of Baer, Ries and Arens of Michael Reese Hospital, to 2.5% as in the series reported by Von Eiselsberg. The important consideration is that appendicitis does occur as a complication of pregnancy rather than how often it occurs.

The stage of gestation is, however, more important, appendicitis becoming increasingly infrequent and increasingly severe as a pregnancy advances. The majority of cases occur within the first six months and more particularly within the second trimester, within which period the appendix becomes transformed from a pelvic to an abdominal organ.

The pathology of acute appendicitis in pregnancy is probably not inherently more serious than the pathology of appendicitis at other times, but it seems more serious, especially in the latter months, because it is so often enhanced and aggravated by delay—a delay due to failure to diagnose it promptly and a hesitancy on the part of the obstetrician to urge prompt surgical relief. The hesitancy of the obstetrician is natural. His idea is to save two lives and he fears that surgery will jeopardize the life of the unborn child. That point of view is fallacious, and Moynihan's rule is the more logical one, that "it is unreasonable to permit an individual to die of one disease simply because he happens to be afflicted with another." *The pregnant woman surely has as much right to her chance of life as her non-pregnant sister.*

Statistical studies of large series of cases show that the gangrenous and ruptured types were respectively five and one-half and three and one-half times as frequent in the pregnant as in the non- pregnant state. All the literature bears witness to the fact that if the acute case is not promptly diagnosed and promptly subjected to operation, rapid spread of the infection is the rule, and that especially if the pregnancy is far advanced; rupture of the appendix is likely to be followed by diffuse, spreading peritonitis, with little or no tendency to localization and abscess formation. Any other result could scarcely be expected. The appendix is located high in the abdomen, there are no loops of intestine to limit the extention and the pus can spread to the pelvis only along the smooth uterine wall. Moreover the uterus tends to crowd the protective omentum out of the way and if, as sometimes happens, the uterine wall forms part of an abscess, the results may be disastrous, for the pendulous, heavy organ changes its position on the slightest change of position by the patient. The movements of the child, as pointed out by Marbury, may have all the effect of a drastic cathartic, since violent excursions during labor destroy whatever localization may have occurred, and there is an abrupt and extensive alteration in the intra-abdominal relations the moment delivery has occurred. Furthermore, the increased vascularity and lymphatic dilatation which are physiologic during pregnancy predispose to the development of phlebitis and thrombosis, while the lessened resistance of the pregnant woman to infections and toxemic processes is a factor in the morbidity and mortality which cannot be ignored. If abortion or labor should occur during or immediately after an acute attack the risks are tremendously increased, for the raw uterine cavity and the gaping, thrombosed sinuses furnish ideal channels for the spread of microörganisms so that post-abortal and postpartal infection is a very serious possibility.

The high fetal mortality, which is due partly to prematurity and partly to toxemia, may be discounted, for it is largely inevitable, but the part which abortion plays in the final maternal result must be mentioned. *The incidence of abortion and premature labor increases in exact ratio to the seriousness of the appendiceal inflammation.* The patient with chronic recurrent or acute appendicitis, who is operated upon promptly, is likely to continue her pregnancy undisturbed—indeed, more likely to do so than the patient whose operation is delayed until the urgency is so pronounced that an operation is undertaken which in most instances is just a gesture of despair. As McDonald so correctly points out: "It is the disease itself, the fever and toxemia that go with it, the gastro-intestinal disturbances, the reflex peritoneal irritation and the direct extention of the infection that are the factors responsible for abortion and premature labor and not the operative act itself." Furthermore, while the maternal mortality is highest among the patients who abort, abortion is not the event which is primarily responsible for the fatality. These women are overwhelmed by their sepsis and are moribund when the fetus is expelled, in other words, they abort because they are dying; they do not die because they abort.

In the light of this knowledge of the potential pathology of appendicitis associated with pregnancy how can the medical man justify the practice of "watchful waiting"? Again, appendicitis is appendicitis in the pregnant as well as in the non-pregnant; and again, the mortality of appendicitis in pregnancy is the mortality of delay.

Probably the chief reason for delayed surgery today is failure to recognize the condition promptly, and prompt diagnosis of appendicitis in pregnancy is not as simple as it sounds. The history of previous attacks is a most valuable point at any time in the pregnancy. In the first trimester the classical onset of abdominal pain, nausea, fever, acceleration of pulse, the localization of pain and tenderness over the McBurney's point, the leukocytosis and a negative urine are as usual. Morning sickness and the general malaise may be sources of error. The changes and chances of pregnancy, particularly as it advances, are likely to introduce further confusion. Right-sided pain is not infrequent, especially between the fourth and seventh months, when the uterus rises out of the pelvic into the abdominal cavity. Localized tenderness may be difficult to elicit because of the size of the uterus and while, theoretically, the location of the pain at increasingly high levels as pregnancy advances and the cecum and appendix are pushed higher and higher into the abdomen seems an excellent point of distinction, actually it does little more than introduce the possibility of upper abdominal disease such as cholecystitis. peptic ulcer, etc. The attenuation and thinning of the abdominal muscles lessens spasm. Frankel's suggestion that the patient be examined while lying on her left side, in which position the heavy uterus is at least partially removed from the field of investigation, is of practical value. Finally, symptoms in the late months are likely to be considered evidence of beginning labor and postpartal symptoms may be considered due to postpartem infection.

The laboratory is not helpful, because leukocytosis in pregnancy is physiologic. A white count of 12,000 is not of much diagnostic value though an increase of polymorphonuclear cells is significant. The sedimentation test is not helpful.

The history of previous attacks coupled with a careful analysis of the clinical signs and symptoms and laboratory data, as a total white and differential count, offers the best safeguard against diagnostic error.

The safest practical rule to follow is to eliminate non-surgical complications and then to operate, even without a definite diagnosis, for here, as elsewhere, John B. Deaver's aphorism is applicable: that, "a hair-splitting diagnosis seldoms gets a patient anywhere except to the grave."

The confusion with eclampsia, which is sometimes ushered in with abdominal pain, nausea and vomiting, is seldom lasting, for the proper investigation promptly clears the field. The most important disease to be differentiated is pyelitis, which is relatively rather frequent in pregnancy and about six times more frequent on the right side than on the left, for the purely anatomic reason that the pregnant uterus normally rotates to the right and so may compress the ureter where it crosses the pelvic brim. Laboratory tests and cystoscopic examination usually settle the diagnosis. However one must bear in mind that the presence of pyelitis does not eliminate appendicitis and one must also remember that appendectomy for pyelitis is better than abstinence from operation on the mistaken diagnosis of pyelitis.

Once the diagnosis is made or strongly suspected, immediate operation should be the rule. In the early months of pregnancy operation is seldom difficult or complicated. In the first trimester there is practically no difference in the pregnant and the non-pregnant. In the postoperative care, the more liberal use of morphine and lipolutin will prevent abortion or premature labor, if it is at all possible to prevent it. The difficulties increase the nearer term approaches and the more urgent becomes the obstetric factor. Manipulation should be reduced to a minimum and the gravid uterus should be handled as little as possible. In delayed cases where perforation has occurred and pus is present or gangrene has set in, the surgeon finds himself on the horns of a dilemma: to drain or not to drain. Drainage should be omitted wherever it can be omitted with safety; but where frank pus is present it must be instituted. It must be remembered that the peritoneum is less to be trusted in pregnancy than at any other time. It must be remembered that drainage of the pelvis is essential but vaginal drainage is not to be considered. The drainage tubes must be placed with special care, with due regard for changing conditions within the abdomen should abortion or labor supervene. Fixed rules cannot be laid down.

From the point of view of the surgeon, appendicitis in pregnancy in its milder manifestations is little more serious than it is in non-pregnant women, though its potentialities for harm are far greater. Appendicitis in its acute manifestations, however, is exceedingly serious. Delay does the child no good and it places the mother in increasing jeopardy with each succeeding hour. The indication for prompt operation, once the diagnosis is reasonably certain, is clear and incontrovertible, and the obstetrician and surgeon who base their practice upon that premise need make no apology for their results.

SUMMARY

FIRST: Appendicitis is a possible complication of pregnancy which, in the chronic recurrent type, is particularly likely to recur, with more acute exacerbations, during pregnancy and which is increasingly serious as pregnancy advances.

SECOND: Prophylactic appendectomy in every woman with chronic recurring appendicitis in the early weeks of pregnancy is recommended.

THIRD: The pathology of appendicitis in pregnancy is aggravated by delay, and because of anatomic and physiologic considerations, it may quickly exhibit severe and fatal manifestations in the absence of prompt surgical treatment.

FOURTH: Abortion increases the maternal risk, but it occurs because of the disease and not because of the surgery instituted for its relief.

FIFTH: The maternal mortality is in direct proportion to the stage of gestation and the severity of the disease.

SIXTH: The diagnosis late in pregnancy is befogged by the various factors which pregnancy introduces, and is almost entirely a clinical matter. Pyelitis offers the chief difficulty in differential diagnosis.

The Serious Aspects of Birth and Death Registration*

R. N. Whitfield, M.D.
Jackson, Miss.

It has been my observation that during the greater part of my seventeen and one-half years of service as director of Vital Statistics very few individuals in Mississippi have considered that there are serious aspects connected with birth and death registration. If the physicians, funeral directors, and citizens generally had considered from the very beginning of our registration law that the recording of births and deaths was a serious matter, we would have about one-half the worries that we have to contend with in trying to serve the public with accurate vital statistics and with proof of parentage, age, and citizenship.

"If" is one of the shortest words in the English language, yet it means a lot, and is the prelude to all explanations of failures and shortcomings in any undertaking. "If" the French and English had been prepared; "if" America were as ready for war today as she hopes to be five years from now; "if" the dog had not stopped he would have caught the rabbit—are some of the sad excuses we hear today for failure to win the goal.

So I say "if" those who are responsible for preparing and filing these vital records had been serious enough all along to prepare them as accurately as possible and to file them promptly, we could do without half of our present office force and render also a greater service to the public.

This lack of seriousness I am sure has resulted in the failure to record at least 120,000 births in Mississippi since the Bureau was established on November 1, 1912. During the same period no doubt as many as 2500 deaths were never registered.

We started off well with the first full year. 1913, when 41 thousand births were registered in the state. Then the registration declined rapidly for the next three years until 1917, when the lowest number of the whole twenty-eight years was put on record. That year I firmly believe that at least 13 thousand babies born in the state were not registered by the attendants at birth. Knowing now how important a birth record can be, we are bound to admit that it is a very serious situation to realize that over 100 thousand boys and girls, men and women, born in the state after this law was passed, have not obtained their birthright in the matter of receiving a permanent record of birth.

We are glad to state, however, that our physicians and the public at large for several years have realized that a birth certificate, or a death certificate, is not merely a scrap of paper or something to be made out as a matter of form or only to meet a legal requirement. If I were to quote a scriptural statement, I would say that "The stone which the builders rejected has become the head of the corner." In other words, vital statistics so little thought of for years by our physicians, the public at large, and even by our health departments, has now become a matter of major consideration.

This interest has been greatly intensified during the past several months since the passage of our National Defense Legislation. A man or woman can scarcely apply for a public position at this time without having in hand a birth certificate. Since last July we have had thousands upon thousands of requests for records of births of individuals born in this state. It gives genuine pleasure for us to locate a birth record in our files for any young man or woman desiring employment; but it is a source of deep regret when we find on searching our volumes of births that no record was ever filed for a given individual who was born in this state after birth registration began.

There are two leading aspects, or purposes, in birth and death registration. The first is for the making of vital statistics, for the guidance of our health officials, for information to the public, for comparison of our health conditions and social conditions with those of other states, and for comparison of these important aspects among counties and cities of our own state. Copies of birth and death certificates from every state are furnished to the national government, more particularly to the Bureau of the Census where national vital statistics are compiled for information to the country at large. These vital statistics are not only of great value to health officials and the public in general but they form the basis of the medical books that are written from time to time and which are studied by the young men of today who are to take our places on tomorrow.

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*Read before the Section on Hygiene and Public Health at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 13, 1941.

In our early days vital statistics information was scarce and was furnished for medical training principally through the small collections of information made in well-organized hospitals throughout the land. Today we have a full and fairly complete storehouse of information on diseases and other causes of death as garnered by our state and national health departments.

The second aspect of birth and death registration is of equal importance, especially to the citizenship which has furnished the records. These birth and death certificates are filed away for safe keeping, and they are to be kept for generations for the benefit of the families concerned. It is fortunate indeed for some states in our country that they have kept birth, death, and marriage records for over a hundred years. It is very unfortunate that in a majority of the states these records have been kept for less than thirty years. They stand ready at all times to prove parentage, age, citizenship, and other important matters.

Since the birth and death records of our people are so valuable, then the accurate preparation and the prompt filing of the certificates should constitute a serious consideration in the minds of those upon whom rests the responsibility for their filing. Too often we find records already on file in our department that are totally inaccurate due to lack of interest in securing the proper information to place upon these certificates. The greater portion of this inaccuracy is due to the carelessness of the individuals responsible for the records in not obtaining information from those people best posted to give the same, and in waiting too long to begin the preparation of the document.

For many years we have been pleading with physicians to obtain the information for a birth certificate from the new mother while he is waiting out that necessary hour after the birth of the child to see that the mother is in good condition. For this purpose we have had printed thousands of obstetric notebooks, each page containing every item necessary to place upon the birth certificate. Perhaps a large majority of our physicians use these notebooks and get the information as suggested, but too many are depending yet on scraps of paper or prescription blanks or on waiting to see the father or the mother at a later date to obtain this important information. Those who wait until a later time or those who prepare the inaccurate records often fail to register births altogether.

While the regulations all these years have required that a birth certificate should be filed within ten days after the birth we are becoming very hopeful that our physicians will soon see the great advantages in filing a birth certificate immediately after each birth occurs. He should consider that it is an obligation to perform this act of justice toward the child just as soon as possible for fear he may forget; besides, under our new arrangements, these birth certificates are scanned by our health departments before they are sent to our state division. Therefore, a great service may be rendered in thousands of cases if the various county health departments can be informed of these births immediately after their occurrence. A great deal of maternal and infant welfare work may be carried out at a time when this service can be of greatest benefit. When birth occurs, if there are any omissions or errors. there is time for the registrar and the health department to get the corrections made, before the certificates are sent to the State Board of Health. Every year we have around five thousand birth registrations that are delayed in filing from one to twelve months or even more. Of course. this is evidence of neglect and lack of appreciation of the importance of these records.

It is equally important that every death record should be prepared with great care and filed immediately after death. The county health department also scans these records and is thus enabled month by month to judge the health conditions of the county by the causes of death which are found among these certificates. A delayed death certificate is usually an inaccurate record. If an undertaker is careless about the time of filing the certificate, certainly he will be careless in the matter of obtaining correct information. We could save the time of almost two clerks in our division if birth and death certificates were properly prepared and promptly filed. We write thousands of letters each year to persons who have omitted information on certificates, and too often we receive no reply.

Many of our physicians are especially careless in defining the cause of death. Of course, we do not require a physician who has not seen the case long enough to make a study of the situation to state exactly what caused the death, but certainly we can expect him to state that he did not have opportunities sufficient to give anything like the actual cause or causes that operated in the case.

Our blanks for birth and death records are not arbitrarily prepared by the Mississippi State Board of Health nor is the list of causes of death which should prevail prepared by us alone. These blanks are uniform with all the states, and we operate on uniform regulations. The list of causes of death used in Mississippi is the International list adopted by the United States and by all other civilized countries.

In closing this dissertation, I would like to call your attention to the fact that the present blanks for birth and death registration are the best we have ever used, and they conform to the changed conditions under which our people live and move about throughout this land. The physicians and undertakers may have thought that it was not of any great importance to bring out clearly the contrast between the place of death or place of birth and the place of residence of the deceased before death and the place of residence of the mother of a newborn child. But these items are worth more today than ever before on account of the fact that hundreds of births occur in hospitals across the county lines from the places of residence and even in homes of parents of a new mother where these homes are located many miles distant. Also, our citizenship is constantly on the move, and citizens of other states even are moving through our state and often die here. Therefore, we want a clear distinction between the actual place of occurrence and the actual place of residence even down to the county, the town, or the rural precinct in each case.

We have our punch cards prepared in a way now that we are able to tabulate the deaths and births of residents and non-residents and the births and deaths that occur in hospitals or do not occur in hospitals. We have arrangements made for more accurate study of accidental and violent deaths provided we get the full information on the certificate.

It is needless to state that there are many serious aspects connected with birth and death registration.

DISCUSSION

DR. H. C. RICKS (Jackson): Unfortunately I did not have an opportunity to read Dr. Whitfield's paper before hearing it here, and I doubt if I can add much to it. In looking over the request blanks that come to the laboratory for diagnosis of sickness in the prospective selectees who are being sent to military camp the business of registering births and deaths appears to be a very serious thing, and the lack of registration especially. I note on these blanks in many instances under "age or date of birth" that these men have no idea of the dates of their births. Now on the whites it is not so serious as it is with the colored, though it occasionally occurs too often in white individuals that these blanks come to the laboratory with the statement that "he has no idea of the date of his birth." That is due possibly to the fact that he may be an illegitimate child or that his mother and father are deceased, or for some other reason he has no idea of the date. One of the serious things about the registration of deaths—and I have seen it in a number of cases—is that it makes the registration the birth a serious thing. In taking out insurance often a person will give his age younger by 10 or 15 years than he really is, which means that some other person is paying the premium on that individual's investment. That happens all too often. If we had our births registered, when they die we could check the death certificate against the previous certificate and we could stop a lot of that. Unfortunately, there are medical men mixed up in this life insurance racket. I do not believe I have seen any instance where a member of this association was mixed up in it, but at least there are men in Mississippi, licensed to practice medicine, who are involved. It is a serious thing for us not to have our births and deaths registered, because often it is not possible to prove we are born and we may come to the point where we could not prove we were dead.

DR. W. H. FRIZELL, (Brookhaven): This question has more than one serious side. Dr. Ricks just referred to the negro soldiers. I believe that Dr. Whitfield said a few years ago that the negro has so many different names we can not rely on any of them. He is born under one name, married under another, does some "devilment" under another one, and finally dies under still another. I have been in this little game of ushering inhabitants into the world more years than I am willing to admit, and only thirty days ago, I got a letter thanking me for getting a birth certificate for a young man who was born in 1893. This boy has a position in Detroit paying him more dollars a day than we earn and he could not hold his job with the government unless he had a birth certificate, so we managed to get him a birth certificate. A great many of these births have been registered but have been lost, and many of them were carelessly reported. So many government jobs now depend entirely on a birth certificate that it is a serious matter. We should, therefore, strive to make these reports accurately for economic reasons as well as professional pride.

DR. F. M. SMITH, (Vicksburg): One reason I like to speak over the "mike" is because I like for people to hear me whether they want to or not. I think one of the most serious aspects of this question is that practically everybody living out of the state of Mississippi thinks Vicksburg is the capital of Mississippi, and about all the letters they write back here to get a certificate they write to Vicksburg, and I have to do much transferring of requests. They come four, five or six a month. I can not solve that at all unless it is because Vicksburg has been a very progressive and up-to-date city.

These always amuse and puzzle me too because they expect us to reach out into the ether and produce a birth certificate. Sometimes they do not say who their mother and father were or when they were born, and of course I transfer them to Whitfield for his prompt and courteous attention. Just last week a young boy of our town who was born in the Delta and whose physician is prominent in that section but had failed to register this boy's birth, was trying to get a birth certificate in order to take a position with the Illinois Central. Hence I can reiterate what has been said of the importance of registering births promptly, because one of the most serious things after a while will be to need that certificate and not have it and have no record of it.

DR. WHITFIELD, (closing): I thank these gentlemen for their discussion.

Depressed Fractures of the Skull*

WALLACE SHEELY, M.D.
GULFPORT, MISS.

THE SURGEON who is called upon to see a patient that has sustained a head injury must consider that head injuries may be classified as to mild injuries of the concussion type, or second degree injuries involving linea fractures of the skull, or severe injuries of the skull in the nature of compound fractures of the skull in which the patient has sustained a depressed fracture of the skull with definite clinical and pathological signs and symptoms. In this paper, I shall deal with depressed fractures of the skull, having the diagnosis confirmed in each case by *direct inspection* of the wound or by x-ray plates. Head injuries of the depressed fracture type essentially dissolve themselves down to the *cranial cerebral topography* and these take in the anatomical structures as well as the neurological structures. In this connection, it will be necessary to give some of the anatomical structures of the skull to determine what areas are involved and also to correlate the neurological symptoms with the area that has sustained the depressed fracture. In this connection, there are certain areas that demand our careful attention, namely, the motor area and its subdivisions on the lateral surface of the skull. The indications, therefore, should consist of fractures of the outer table of the skull and fractures of the inner table of the skull. The diagnosis of a fracture of the external table may be made by direct inspection of the wound under local anaesthesia before any major operative procedure may be taken. By direct inspection of the wound we may see how much depression has been sustained and determine indirectly if there are any neurological signs and symptoms to indicate pressure upon any of the motor areas of the brain. The area involved may be along the sylvian fissure or fissure of Rolando and other motor areas that may be involved due to cerebral adema or fragments of bone driven into the brain tissue. The extent of the injury, the sensory or motor disturbances as noted from the preliminary examination is, in my opinion, of paramount importance. The fractures that involve the inner table of the skull are more difficult of diagnosis and we will have to depend more on neurological symptoms and x-ray plates as it is possible to obtain a fracture of the inner table of the skull with marked depression and still have a normal external table. This type of fracture is the most serious type, in my opinion, and deserves careful consideration at the time of examination. As we look at the topography of the skull we find that the surgeon who is called upon to carry out any operation on the skull must possess an accurate knowledge of the anatomy of the parts involved. Added to this, he must have at his command some simple method of depicting on the surface of the skull the most important structure so as to avoid too extensive an operation upon a depressed fracture and avoid damaging structures that lie on either side of the fracture. The more direct and the more simple the outline of cranial cerebral topography, the more valuable it is to the surgeon. Firstly, the skull can be divided into two lateral halves by the surface marking of the superior longitudinal sagittal sinus. You will remember that this sinus originates at the crista galli and passing backward along the attached margin of the falx cerebri, terminates at the internal occipital protuberance. It may be represented by a line drawn from the base of the nasion over the vertex of the skull to the external occipital protuberance, the so-called inion. This line corresponds to the course of the occasionally persistent metopic sagittal suture between the two halves of the frontal bone to the sagittal suture between the parietal bone and the middle line of the upper tabular portion of the occipital bone. Secondly, each lateral half of the skull can be subdivided into *supra and infra tentorial regions* by a line which marks the external attachment of the tentorian cerebelli, in other words, by the line of the lateral sinus. The lateral sinus, you will remember, is represented by a line presenting a slight upward convexity which is drawn from the external occipital protuberance to the upper and posterior part of the mastoid process of the temporal bone. We shall now deal with the fractures that occur in the infra tentorial region. You will recall that the cerebelli lies wholly beneath the tentorian cerebelli and it is obvious that in operations carried out over this portion of the brain the surgeon is limited in his field of exposure, above, by the line of the lateral sinus and. on either side, by the posterior border of the mastoid process. The division between the halves of the cerebelli may be represented by a line drawn vertically downward from the external occipital protuberance to the nuchal region. This line represents the surface markings of the occipital sinus and the falx cerebelli. The supra tentorial region takes in the entire cerebrum. In this paper most of our subject of depressed fractures of the skull will deal with the frontal and the parietal bones on each side of the sagittal and metopic sutures. The entire cerebrum is the most frequent part of the brain involved in depressed fractures of the skull. In this connection, it is important that we map out the sylvian point and fissure. You will remember the sylvian point represents the site of divergence of the three limbs of the sylvian fissure. It lies one and one-fourth inches behind the malar tubercle and one and one-half inches above the upper border of the zygoma by the main posterior horizontal limb; passes upwards and backwards to a second point situated three-fourths of an inch below the parietal eminence. This area is very important in localizing the area that is so many times involved with depressive fractures of the skull. The vertical limb of the sylvian fissue is directed upward for about one inch while the anterior horizontal limb passes forward for about the same distance. No less important is the fissure of Rolando. This, from the surgical standpoint, is the most important fissure of the brain and one that causes more complications following surgical intervention than the other fissures. You will remember that this fissure can be outlined by a point taken in the median anterior posterior line which lies one-half inch behind the mid-point between the nasion and the inion; and from this point a line is drawn for three and one-half inches toward the mid-point of the zygoma. This line is inclined to the median anterior posterior line at an angle of 67½ degrees, three-fourths of a right angle. We will, therefore, see the location of the sylvian point and fissures to Sylvius and Rolando have a definite place in cranial topography and will enable us to outline the cortical motor and sensory areas of the cerebrum. According to their reseaches, Sherrington. Grunbaum, Campbell and others tend to show that the cortical motor areas are situated entirely anterior to the central fissure of Rolando. Extending above, slightly on the medial aspect of the brain, and spreading in the downward direction practically to the sylvian fissure in the anterior direction, there is no absolute line of demarcation. The motor region spreading slightly by means of gyri annectantes on to that part of the brain which lies anterior to the precentral sulcus. The motor strip is less than three-fourths of an inch in breadth. Therefore, we see that any depressed fracture of the skull directly anterior to the fissure of Rolando for about one inch will involve the motor strip of the cerebrum. You will recall that the motor area corresponds from above downward, to the movements of the opposite lower extremity (namely, toe to hip), from upper extremity (shoulder to finger, neck and face). It is a point of some general utility to bear in mind that the temporal crest intervenes approximately between the region responsible for the movements of the upper extremity above the crest and those for the movements of the muscles of the head and neck below the crest. Therefore, a fracture that occurs above the crest will produce neurological symptoms in the *lower extremity* and likewise a depressed fracture below the crest would produce neurological symptoms of the muscles of the *upper extremity.* I cannot emphasize too much the importance of depressed fractures in the area of the crest, due to the fact that the depressed fracture will press upon the nerve centers that will allow us to determine the amount of depression sustained and somewhat of a surgical prognosis may be given for injuries involving this area. On the left side of the head, you will recall the motor speech *center of Broca corresponds* to that part of the brain which lies in the angle between the anterior and posterior horizontal limbs of the fissure of Sylvius. As we find a few cases that are admitted to the surgical service with a depressed fracture of the skull involving Broca's area in which the patient is speechless or unconscious, the primary registering of common sensation probably occurs in the posterior central gyrus immediately posterior to the fissure of Rolando. The posterior central sensory area occupies a position behind the fissure of Rolando very similar in extent to the motor area in front of that fissure. Therefore, depressed fractures of the skull involving the area immediately posterior to the fissure of Rolando will allow us to gain some knowledge of common sensation and the disturbances that occur when the depression presses upon the common sensation area. Such localization is important from the surgical standpoint and will give a better prognosis of marked sensory damage due to a depressed fracture than a depressed fracture causing a similar damage to the surface anterior to the fissure of Rolando (motor area). It will further be remembered that primary visual disturbances occur when depressed fractures involve the occipital lobe more especially on the medial aspect and the auditory impulse disturbances in the first temporal sphenoidal lobe. In this connection, you will see that I have tried to localize the depressed fracture of the skull to correspond to the clinical signs and symptoms as presented by the case. The advantage of such knowledge cannot be stressed too much as it is very important to localize the area of depression and check to see if the neurological symptoms correspond with the area involved. The clinical signs and symptoms presented at the time of the injury may lead immediately to the diagnosis of a depressed fracture in a certain area and, upon operating, find that the clinical findings coincided with the area involved in the brain. In order to avoid recapitulation, it will be convenient for me to group together fractures of the vault of the skull into two main groups according to whether operative treatment is necessary or not. A general review of the indications for operations will show that the adoption of an expectant policy frequently ends in disaster and you have to encounter a few of these cases to convince you that the surgical procedure should have been carried out. In the event of the general condition of the patient being compatible with operation, such treatment is necessary in: first, all cases of depressed fracture, whether diagnoses by palpation or by inference, whether simple or compound, whether complicated by extradural or localized subdural extravasation of blood; third, all depressed fractures that are compound. In all of the above cases, both from the presence of depressed fragments of the bone and from associated injuries to brain and intracranial vessels, it is obvious that no mere expectant policy should be pursued. It must be remembered that here is a possibility of meningeal infection and the remote onset of Jacksonian epilepsy, etc. Active surgical treatment is imperatively demanded, for it is not only necessary that every effort should be strained to save the patient's life but that the surgeon should carry out those procedures that will guard against the more remote possibility of injury. When there is a depressed fracture with severe concussion, and considerable doubt exists with regard to the advisability of urging surgical interference, in general, a persistent subnormal temperature implies such severe intracranial injury and so severe a state of shock that operation would probably improve the patient's condition and here our judgment must be carefully weighed and all angles considered. On the other hand, when the temperature rises progressively, it may be stated that the patient has passed from a state of shock to that of reaction, from the stage of concussion to that of compression; that hemorrhage is taking place within the skull and immediate operation is demanded. This would seem to indicate that intracranial pressure is increasing and that the sooner the pressure is relieved in the cranium, the less damage will be suffered by the brain tissue. The proper surgical procedure at this time may be the turning point in the patient's recovery or his death. In depressed fractures the usual operative procedure is necessary, depending upon the amount of osseous tissue involved. If the depressed fragments of the bone are interlocked in such a manner that simple elevation of the fracture is impossible, such as we see in pond or gutter fractures, it will be necessary to trephine the skull near the fracture in order to secure the proper elevation of the depressed bone. Generally, the trephine circle would include the outer portion of the depressed area. The trephined piece of bone is removed and the depressed bone is elevated or removed as the case indicates. This surgical procedure is of paramount importance and should be done with the most careful technique and with due consideration for asepsis. The pericranium should be stripped away from the depression so as to get a better exposure of the edges of the fragment. Care must be taken to avoid more pressure than is absolutely necessary over the depressed fragments for fear of injury to the underlying soft parts. This technique is very important when it is realized that the fracture of the internal table is almost invariably more extensive than that which involves the external table of the skull. When the *degree of depression* and the splintering of the internal table are not excessive, the parts may be elevated into position. If, however, there is some uncertainty that exists with regard to the possibility of extensive splintering of the internal table with dural laceration or other lesion makes it imperative, the depressed fragments should be either elevated and removed or elevated to an extent where the dura can be fully investigated. If the dura presents a dark purple or brown color, there has been a hemorrhage under the dura. If the dura is torn, the opening may require enlargement in order that the brain may be brought into view in such a manner that any bony fragments may be discovered that were driven into it and all such fragments removed. It is important that this be done under direct vision and not depend too much upon the x-ray plate to localize these fragments. However, too much probing around in the brain tissue may result in more damage to the patient than a small fragment of bone that remains in the cerebral tissue. Some cases have been known to have fragments driven into the brain tissue and cause no trouble, they being considered "silent fragments." When the depression is of such a nature that the elevation of the fragments can be carried out without preliminary trephining, the fragments may be raised with a periosteal elevator and the membranes and area about the fragments may be examined. The further surgical treatment may be varied by the different operators. The closure of the wound with or without damage may be left to the dictates of the surgeon. The main problem consists of determining the nature of the depressed fracture and the wound may be closed or left open, depending upon the amount of contamination produced by the injury or by surgical intervention. In my opinion, the ideal can never be accomplished in the treatment of a depressed fracture of the skull due to the fact that the immediate prognosis cannot be stated nor can the future prognosis be stated very clearly in depressed fractures for the reason that complications and neurological symptoms may develop many years after the fracture has healed. Our axiom must be, in all depressed fractures, that we save a life but we may have a psychiatric or a neurological patient the rest of their lives.

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*Read before the Section on Surgery at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 14, 1941.

DISCUSSIONS

DR. M. M. SNELLING (Gulfport): The essayist has handled his paper in a splendid fashion. He has conveyed and illustrated the cranial topography and the cerebral anatomy in a most clear and interesting manner.

I agree with him that these cases must be handled in a manner requiring at times very acute judgment.

According to Giurdijan, the depressed fractures of the skull can be divided into three classes, and three divisions, namely, simple, compound and complicated of the anterior, middle, and posterior one-third of the skull.

The anterior one-third offers the best possibility of complete recovery. However, in complicated cases where the brain is lacerated in the inferior surface of the anterior portion, the prognosis is grave. If in the anterior portion and on the left side, one can keep in mind the possibility of personality changes.

I knew a minister's wife who had apparently recovered from a moderate depressed fracture in the frontal area. Her case had been handled conservatively and not operated upon.

Well, about six months later she began to cuss her husband, smoke and drink. He stood for this, but when she started making passes at the ice-man, then she was taken eventually to a neuro-surgeon.

An operation helped her, but her result has not been nearly as perfect as it would have been had she been relieved of the pressure on her cerebral tissue six months earlier.

The other two areas offer correspondingly less of ability to recover. The posterior one-third group gives by far the gravest prognosis.

The essayist is eminently correct when he advises that shock be treated first. Too many times a patient is needlessly and additionally shocked by being x-rayed. An x-ray helps, but the initial treatment shock is the first axiom.

Again let me say, I have greatly enjoyed this paper and in closing I might add one other factor to look for, particularly if the patient is a negro and a little short man as I once saw.

He had been struck on the vault of the cranium in the parietal area by a fruit jar full of preserves. After digging a lot of figs out of the scalp wound I discovered that he had a depressed fracture of the outer plate. The little negro didn't complain of or exhibit a single neurological symptom. All he said was his feet hurt—I believe he was standing on the side-walk—and the pain might be interpreted as injured feet due to a *contre-coup* of the arches.

DR. H. L. RUSH (Meridian): No patient should ever be operated on when in shock. Cold clammy extremities, subnormal temperature, rapid thready pulse, increased respiratory rate, low diastolic pressure and abnormal pulse pressure represent this condition and prompt treatment should be instituted. Avoid x-ray or neurological examination or unnecessary movements of the patient until shock has been brought under control. Intravenous medication with 50% glucose or sucrose solution or a blood transfusion may be given.

Avoid morphine and its derivatives if possible in craniocerebral injuries. Its depressant effect on the respiration may prove fatal. The respiratory rate is of extreme importance as it frequently gives warning of an impending catastrophe.

Compounded or depressed fractures require operative treatment as a rule. Extradural hemorrhage may require operation at the earliest possible moment after surgical shock has abated. Strict asepsis must be practiced or meningitis or cortical abscess will result. A compounded fracture of the skull, where foreign bodies, fragments of bone, hair or dirt may have entered, require débridement and proper repair as promptly as possible, instituting appropriate drainage if necessary.

Heart Disease in General Practice*

JOHN A. MURFEE, M.D.
AMORY, MISS.

WHEN THE words general practice come to our minds they mean country practice. Hence, this paper is entirely free of all electrocardiographic evidence of heart disease and other evidences which highly specialized apparati are able to give. However, I do not in the least mean to imply that these fine instruments of precision are not of value.

The problem of diagnosis is the one that confronts us, also that of prognosis. I doubt very seriously if there are as many as one-tenth of all the cases of coronary occlusion or thrombosis that are properly diagnosed before death. The oldest and the youngest of us all have seen many times a patient fall dead who had previously been in our office and had been told "your heart's all right. You have nothing to worry about." How many of these had coronary heart disease?

The textbook description of coronary occlusion is that of agonizing precordial pain possibly radiating along the sternum to the epigastrium or to the left side of the neck and down the left arm. This is perfect, and the man or woman having such is labeled and treated as a coronary patient, but what about the man past fifty who says, "Doctor, after eating sometimes I feel like I am choking to death." His heart sounds normal. The pulmonic second is slightly accentuated. There is no evidence of arteriosclerosis. The patient's abdomen is negative to palpation. Nitrates administered sublingually offer relief immediately, but the same will also relieve a spasm of the common duct, cardia, or pylorus at times. One-half cc. of epinephrine 1-1000 brings on an attack, but this will not precipitate attacks of the G. I. complaints. It is well to know whether a person of this calibre takes his bath in shower or tub, whether he crawls through the wires of a fence or goes out of his way to go through a gap, if he wakes up at nights and sits on the side of his bed, if he sometimes feels a sensation of anxiety go over him quickly and leave. All these and more often give us the impression of neurosis, but may mean coronary disease.

I have seen coronary occlusion on several occasions imitate other conditions so closely that the differentiation was impossible without the aid of the electrocardiograph. One woman had an excruciating pain in both ears, a man was about to be operated upon for perforated peptic ulcer until the intern took an electrocardiogram, another had pain so similar to a right uteral spasm that retrograde pyelograms were done. Certainly anyone can be mistaken in a diagnosis, but these instances should make us all the more conscious of coronary disease and its frequency.

The physical findings in a typical case of coronary occlusion are shock, excruciating, substernal or epigastric pain. These often make the diagnosis more simple, but what about the fellow who calls in the middle of the night with "gas on the stomach" whose heart sounds appear muffled. There are a few fine rales in the bases and the blood pressure is not abnormal from his previous level. These are the usual types of cases who have had infarcts of the smaller coronary branches. Anginal pain may simulate arthritis of the wrists, shoulders or elbow. The treatment of coronary infarction is almost settled —morphine to produce absolute rest, therapy for congestive failure if it ensues.

The therapy of angina pectoris is slightly more difficult. Nitroglycerine, theobromine, sodium nitrite, erythrol tetranitrate, aminophyllin, etc., have been faithful friends and show no sign of not remaining so. One may be surprised, however, how much easier the above work if he persuades his patient to wear an abdominal binder. Rest is a factor in the treatment of any coronary disease.

If we are to treat heart disease in its incipiency and its full manifest array, there are certain things we must look for to answer the patient's questions as to whether he has a bad heart. A complete and carefully taken history is of utmost importance. The age of the individual invariably places him in a narrower group. The first decade presents rheumatic heart and congenital heart disease. From twenty to forty rheumatic heart disease occurs most frequently with syphilis as an etiologic factor coming to the front at the end of the thirties. Between forty and sixty luetic heart disease manifests itself most frequently with coronary and hypertensive running a close second. From sixty to eighty coronary and hypertensive cardiopathy hold sway. Thus we can immediately concentrate our diagnostic possibilities.

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*Read before Northeast Mississippi Thirteen Counties Society.

The past history is of great significance. Growing pains should be inquired about, for there may be diastolic murmurs, the cause lying here. Scarlet fever and streptococcic throat may be the beginning of the rheumatic valvular lesions. Typhoid fever and diphtheria may be the initiators of degenerative heart disease. The fact that the patient was a blue baby may be of significance. Whether one has had any genital lesions or not is certainly of importance. Gonorrhea and its frequent association with syphilis should be sought for. One should ask if the child was extremely nervous or had Saint Vitus's dance. Hyperthyroidism might be looked for in past diseases. Pneumonia as a cause of constrictive pericarditis is to be taken into thought. As a youth was this an athletic individual, and did he carry on the usual games with his classmates? If a woman, did she have any symptoms of cardiac disease while pregnant? Has he or she ever been told hypertension was present?

Of greatest significance is of what the patient complains:

Dyspnea: This may vary from a slight breathlessness to an extreme want for air. If this is not related to exertion it may be one of two types: (1) The sighing respiration type. These individuals complain that while at rest they often have a feeling that they are not getting enough air and have a desire to take a deep breath. Sometimes they are observed to take a deep breath during an interview. This is a symptom associated with nervous fatigue and not associated with organic heart disease. (2) Paroxysmal nocturnal dyspnea. These patients are awakened at night, sit up, probably move to the window for air or turn on the fan. This symptom is serious and one seldom lives over two years following its first appearance. It is caused by ventricular insufficiency with pulmonary congestion and seen sometimes in coronary infarction.

It is important to know how dyspnea is brought on whether by mental strain or physical exertion. If the dyspnea is of Cheyne-Stokes, Biot's or Kussmaul's type we are helped much farther with our diagnosis.

Aortic aneurysm *per se* causes dyspnea only if it presses on the trachea, otherwise the dyspnea associated with such is due to concomitant narrowing of the coronary orifices or an aortic insufficiency and left ventricular failure.

Orthopnea: This may be of two types—orthopnea of choice and orthopnea of necessity. It depends upon the position of the lungs. Some patients with dyspnea and orthopnea experience more marked relief when bending forward in bed. It is in this position that only a small portion of the lungs is in the dependent position and the pressure in the inferior vena cava aids in shunting blood to the periphery.

Paroxysmal dyspnea: This is caused by a sudden and very transient failure of the left side of the heart due either to an increased arterial pressure or venous return or both. In the precipitation of such attacks of the horizontal position of the body, eating, excitement, nightmares, etc., are partly responsible.

Cough: The mechanism of this type of cough is essentially the same as any other type of cough. How many coughs of cardiac origin have been passed on as the basis of chronic bronchitis! Paroxysmal nocturnal cough is frequently the forerunner of paroxysmal nocturnal dyspnea.

Weakness and exhaustion are symptoms complained of by the patient long before dyspnea comes on. Morning weakness is complained of by cardiac patients with hypertension.

Giddiness and fainting are common in patients with heart disease. Syncope has long been recognized in neurocirculatory asthenia. Light headaches occur in patients with mitral stenosis. That syncope associated with aortic stenosis is likely to occur at rest, while that of mitral stenosis is most likely to occur after exertion due to obstructions of blood flow through the mitral valve. That due to aortic stenosis is of vagal stimulation from the myocardium and is more likely to terminate in fatal syncope. Intermittent claudication has been statistically proved to be connected with many cases of coronary thrombosis, because of concomitant arteriosclerosis of the lower extremities.

Palpitation is probably one of the most abused symptoms of heart disease and curiously enough, the doctors encourage it. Patients describe it as a thumping, pounding, sudden stopping, turning over, fluttering, choking runaway heart, etc. It is a normal symptom frequently and is caused mostly by mental excitement or following a large meal. Many women have come to me complaining of smothering because their heart beats too fast after meals. Belladonna and bromides cure this form of heart disease very easily. Palpitation, however, is likely to be present with any form of heart disease, more particularly hyperthyroidism and anemia.

Possibly the symptom which brings more patients to the physician with reference to the heart is that of heart ache. This is one of the most variable of all symptoms and because the heart is the vital organ of the body and because all think of it as being subject to disease and the fact that there are many pains that may lead one to believe that they came from the heart, the physician is called upon to differentiate this form of heart disease. The patient may describe sharp shooting pains which he is sure come from the heart. The pain may be a steady ache and may be caused by neuritis, thoracic injuries, neuralgias, pleurisy, embolism, diverticula and ulcers of the esophagus, ruptured emphysematous blebs or herpes zoster, etc. I often see patients complaining of pains over their heart, the cause of which I am not sure, but on strict questioning, I find that they often have similar pains over the other side of the chest. But these are soon forgotten, and it is often no hard matter to convince the patient that the two pains are exactly alike but in different locations. Once the patient understands this, his neurosis is over.

It is true that the dull pericardial distress is a common symptom in patients with heart disease. The pains of angina and coronary thrombosis have been discussed. The heart aches co-existent with organic heart disease usually last for hours, these types of aches being due to dilatation of the chambers. The pains of pericardial effusion or fibrinous pericarditis are of this dull aching character.

The examination of the patient is less likely to reveal so much as is the carefully taken history. However, this is often neglected. No patient being examined for heart disease should be gone over unless he is unclothed to his waist. The inspection of the chest, neck, and abdomen will tell nearly as much as auscultation. Dilated neck veins are suggestive of constrictive pericarditis and of increased venous pressure. It is important to see if the patient is at ease, what attitude he assumes to make himself more comfortable. The color of the skin and lips gives information as to cyanosis. Cyanotic flushing of the malor eminences suggest mitral stenosis. Central palor of the face with cyanosis of the lips and ears may be suggestive of aortic disease. Diffuse cyanosis with or without clubbed digits may be suggestive of congenital cardiac defects or these signs may mean subacute bacterial endocarditis.

Inspection of the neck may be the only means at our disposal of detecting auricular flutter. The bobbing of the head with each systole of the heart (De Musset's sign) is caused by the rapid fall in the carotid pulse. Extremely slow pulsations of the carotid arteries, occurring synchronously with the apex beat, is characteristic of complete heart block.

The thorax on close observation reveals many helpful points. A forceful and clearly defined apex beat in the sixth intercostal space and displaced to the left is indicative of an enlarged left ventricle; likewise, pulsations in the third and fourth spaces near the sternum mean dilated right ventricle. Broadbent's sign, or forceful retractions of the left chest wall, is seen in adherent pericarditis.

Palpation for thrills and shocks means much. A rough systolic thrill at the second or third interspace means aortic stenosis, a diastolic-aortic regurgitation.

Percussion of the heart reveals only its size and its value is limited to thin people as a rule. However, unless we use this method of delineation we soon lose our diagnostic acumen. Aneurysm of the aorta is not to be forgotten in percussion of the heart, and percussion of the lungs for fluid is often forgotten.

Now comes that great and wonderful art and science of auscultation which most of us have adopted to the exclusion of other methods of physical diagnosis. The stethescope, indeed, has become to be an instrument almost synonymous with the Aesculapian staff to most of us. We pull it proudly out of our satchel and place it on the patient's chest; move it about from place to place before the awed interest of on-lookers; we then lift our heads proudly, as if the heart has been properly auscultated, shake our heads with the verdict, "he has a bad heart"—which means about as much as saying he has bad breath.

Just how many important points can be ascertained by listening to the heart and lungs could never be told. The heart of recent anterior coronary occlusion is apt to be quiet and its sounds distant but not muffled. Fine rales are present in both bases. Later a pericardial friction rub may be detected. This is only transient and must be often sought for if heard at all. Yet, this one small point may make the diagnosis of coronary infarction with subsequent change in treatment and may mean the life of the patient. To cite a case: The patient was 68. He was getting up out of a chair when a most severe pain struck him in his upper abdomen. He was in mild shock when the physician arrived, had vomited twice, upper abdomen rigid, heart regular so far as the sounds could be heard. Fine rales were in the bases. Because of a history of past qualitative dyspepsia to fats, etc., a diagnosis of gallstone colic was made. He subsequently became jaundiced and his fever rose to 103°. The rigidity of his upper abdomen was still present. The diagnosis of G. B. tract disease was evidently established. It was decided to give large doses of vitamin K by hypodermic, followed by a whole blood transfusion. The gallbladder was to be drained. The patient was opened under local anesthesia, and expired as the peritoneum was split. The gallbladder appeared not enlarged; the liver was markedly swollen and congested. Necropsy showed severe myocardial infarction of the anterior coronary. Had there been proper interpretations of these distant heart sounds plus the basilar rales, this man might have been saved.

The accentuation of these heart sounds is a point that cannot be over emphasized. P2 is normally accentuated in infants and children but in people past fifty this is very abnormal and means increased pressure in the pulmonary circuit due to arteriosclerosis of the pulmonary arterioles, or this pulmonic hypertension may be due to mitral stenosis. A2 may be absent as in cases of aortic stenosis or it may be replaced by murmurs in aortic regurgitation. A marked accentuation of A2 means increased tension in the arteriole tree or an increase of intra-aortic tension as sometimes occurs in syphilitic aortitis. Naturally the rhythm is important and too little time is allowed here to discuss it. A pulse deficit means auricular fibrillation as a rule. Gallops rhythm is of serious consequence and carries a grave prognosis. Auricular flutter produces a rapid regular ventricular rhythm, but not so rapid as paroxysmal tachycardia. The rate may change suddenly from time to time. Carotid sinus pressure often produces temporary slowing but not abolishment, whereas in paroxysmal tachycardia the pressure stimulations may or may not abolish the rapid rate.

MURMURS

Systolic murmurs are quite numerous and a great many times are only functional in nature. These are usually soft and blowing in character and located most commonly at the pulmonic area. They are caused by anemia, hyperthyroidism, and febrile states. Sometimes these murmurs persist for quite a while after the patient has resigned his normal health. Those systolic murmurs which are very loud and heard at the apex usually mean organic trouble. They may be caused by stretching of the mitral ring from left ventricular dilatation.

Diastolic murmurs as a rule mean organic heart disease. The two most common are the mitral and the aortic. Both are as a rule hard to hear. When the aortic develops under observation it is usually best heard to the left of the sternum in the third interspace and may closely resemble the breath sounds in pitch. It is best heard in the upright position leaning slightly forward and using a diaphragm stethescope. When the murmur is fully developed it is best heard over the aortic area and is transmitted from the base to the apex. This is in contrast to the mitral diastolic murmur which is never transmitted to the base, and is often localized or transmitted into the axilla. The mitral diastolic usually comes definitely after the second sound and the aortic murmur comes just after the second sound and when fully developed usually completely obliterates the aortic second sound. About the only two exceptions of diastolic murmurs meaning organic heart disease are the Graham-Steele murmur seen in advanced mitral stenosis and the Austin-Flint murmur in aortic regurgitation and also in hypertension.

TREATMENT

Time permits only the discussion of the treatment of cardiac decompensation which is the end result of many types of heart disease. When a heart is in failure most of us think of one or more chambers failing to send its blood along as it should go. Any one chamber of the heart may fail before any other depending on the pathology present. The right auricle, however, is seldom found guilty of this trick. Given a heart in failure, let us say, in a moderately severe case of decompensation, and there is edema, ascites, edema of the lungs, and pleural effusion, and a swollen tender liver. The patient is dyspneic on the slightest exertion. All of us say at once to digitalize this man. This is universally accepted. One may, however, use one of the squill preparations. Whether we use the slow or fast method of digitalization is not important, provided we remember that in extremely old people where there is a marked degree of arteriosclerosis, too rapid digitalization is apt to produce ventricular fibrillation and death.

If the edema is mild in character it will soon disappear after the heart has healed under the influence of digitalis. However, in severe cases, we wish to move the water sooner and this is usually done by giving ammonium chloride grs. 22½ three times daily for several days and then 1 cc. of one of the mercurial diuretics. Several days later as much as 2 cc. may be given. It is very important that this be given directly into the blood stream or deeply into the muscle. Due to having seen several cases of sloughing when the drug was used intramuscularly, I prefer the intravenous route. As for the ascites and the fluid in the chest, after the patient has become digitalized, I prefer to aspirate the fluid and to drain the abdomen by paracentesis. This I know is not the rule when it is due to heart failure, but is much easier on worn-out heart and kidneys when they do not have to deal with the excess water.

Complete bed rest, salt-free diet and limitation of fluids is well tolerated in the treatment of any congestive failure treatment.

Endometriosis*

G. Y. GILLESPIE, JR., M.D.
GREENWOOD, MISS.

For more than a century endometriosis has been classified as a pathological entity, yet it still remains to many surgeons an unfamiliar lesion, frequently not clinically recognized and often not satisfactorily treated.

Endometriosis is the growth of uterine mucous membrane within the abdominal cavity where it is not normally present, and this endometrial tissue is indistinguishable both pathologically and physiologically from normal endometrium.

These areas of abnormal endometrial growth are most frequently found in the lower abdomen on the ovaries, the Fallopian tubes, the rectum or the bladder—either in continuous connection with the endometrium, or without connection to the endometrial cavity.

Many theories have been advanced as to the cause of this abnormal growth of endometrial tissue. Some authorities claim there is a direct metastasis of endometrial cells through blood vessels and lymphatics. Others claim there is a direct spreading by contiguity of tissue through the myometrium or muscle wall of the uterus. And again the most plausible theory is the retrograde flow of menstrual blood carrying islets of endometrial tissue through the tubes out into the peritoneal cavity. But regardless as to how they get there, these heterotopic islands of endometrial tissue are responsive to ovarian stimulation, and continue to go through the physiological function of normal endometrial cells as long as the ovaries continue to function.

Consequently it is a disease of menstrual life and is more common during the middle or late menstrual period of life. No cases have been reported before puberty; and although there is definite ovarian hormone secretion after menopause, whatever change has come about to stop menstruation, or the normal function of the endometrium, likewise has its effect on the endometrial implants, and the incidence of endometriosis after the menopause.

The most frequent location of the lesions are in the ovaries; occurring as small bluish cysts, or progressing further as adherent cysts of very variable sizes, filled with thick, syrupy, chocolate colored material, they are known as "chocolate cysts of the ovary."

They may occur on the tubes, on the uterus or bladder, on the pelvic peritoneum in the posterior cul-de-sac or in the rectovaginal septum, and may vary in extent from the small blue domed cyst in the ovary, to a complete involvement of all pelvic organs and loop of intestines, into a tangled mass, held together by firm adhesions.

Pelvic distress is the most constant and characteristic symptom of endometriosis. This varies from a slight discomfort to severe almost unbearable pain. It may be present and persist throughout the month but is always aggravated or more marked at the time of menstruation. The location of the pain may be in any portion of the lower abdomen. The location as well as severity of the pain depends upon the organ involved and varies with the extent and activity of the endometrial implants.

There may be a prolongation of the menstrual period or a more profuse flow, but abnormal bleeding is not a common symptom. Dysmenorrhea, dull and constant in character, with periods of crampy exacerbations usually of gradually increasing severity from month to month is a rather common finding. The findings on bimanual examination obviously depend on the extent of the lesion and organ involved, and preoperative diagosis from other pelvic lesions is very often a difficult but most important procedure.

Painful acquired dysmenorrhea increasing in severity from month to month, with a history of acquired painful sexual relations and pelvic findings of tender nodules in the cul-de-sac or an extremely tender mass in the pelvis, in a woman, between 25 and 45 years of age should lead to a suspicion of endometriosis.

When we consider the most effective treatment of endometriosis, let us remember that these lesions are benign, yet they have semimalignant characteristics in that they invade tissue, and they are entirely dependent upon ovarian activity for their continued growth and development. Treatment must be individualized according to the age of the patient, the desire for children, the extent of the lesion, and the tissues involved.

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*Read before the Delta Medical Society at its thirty-sixth semi-annual session, Greenwood, Miss., October 9, 1940.

In the younger patient conservation of ovarian tissue should be employed whenever possible, even at the risk of the return of symptoms. While in older patients supravaginal hysterectomy with removal of both ovaries and the removable endometrial lesions is the most satisfactory procedure. The uterus should always be removed when both ovaries are removed for it becomes a useless organ and is dangerous to future health. The morbidity and mortality results of treatment depend altogether upon early diagnosis and early operative procedure.

Since we are inclined to believe in the catamenial tubal reflux theory causing endometriosis, certain prophylactic precautions suggest themselves.

Tests for patency of the Fallopian tubes should not be made just before the menstrual period or immediately after currettage.

Routinely packing the cervical canal after minor operative procedures as curettage, cervical repair, etc., should not be done.

Strictures of the cervix uteri from polyp, cervical infection and following cauterization should be relieved.

Retrodisplacements of the uterus likely causing poor drainage and retrograde flow of uterine blood should always be carefully observed and if producing pathological symptoms should be corrected.

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The machine age in which we live is adding importance each day to traumatic surgery. The general practitioner must at least be the main first-aid man on the job.

Abraham Jacobi, the father of pediatrics, was in active practice at the age of 90 after practising sixty-three years.

Home accidents claimed the lives of thirty-two thousand, according to the last figures. About five million were injured. Falls on levels caused the greatest number.

Four-fifths of deaths in automobile accidents happen at night. The eyesight must not be as accurate at night. Alcohol is the big cause.

The program for the Mid-South in February is now complete according to Secretary A. F. Cooper. Next month we expect to give it to you in full.

The Annual Tulane Clinics will be held during the week, October 20 to 25, 1941. On the afternoon of Saturday, October 25, Ole Miss and Tulane will play football in Tulane's Homecoming game.

The September meeting of the Northeast Mississippi Thirteen Counties Society was one of the very best ever. The "new" essayists were very fine and it was certainly good to have Dr. Nix, of New Orleans, and his fine son. Congratulations to Dr. Bryan and the doctors of Monroe County.

The next meeting of the Mississippi State Medical Association will be held at the Robert E. Lee Hotel in Jackson in May. Our state meetings grow more important each year. Dr. A. Street is the able president this year. We may expect one of our best programs.

As important as health is to the nation and as much as the President seems to be interested in the welfare of the people, the time would seem propitious for us to have a Secretary of Health in the Cabinet. It is just common sense and reason and justice to have a secretary of health.

Notice of examination to recruit doctors of medicine for Maternal and Child Health Specialists positions in the Children's Bureau of the Department of Labor has been announced by the Civil Service Commission. Applications for positions must be filed by November 15, 1941. These positions pay from $3,200 to $5,600 a year. Further information may be obtained from the Commission's representative at any first or second class post office, or from the central office in Washington, D. C.

The majority of people continue to die of common ordinary everyday diseases. It is claimed that malaria kills three and a half million in the world at large each year. The big challenge to the medical profession is to apply effectively what we already know in medicine. This does not mean that there should be any let-up in research work. Every doctor should take a pride in the physical and mental health of his clientele. No one thing should be looked upon as common or of little importance in the practice of medicine.

The thirty-fifth annual meeting of the Southern Medical Association will be held this year in Saint Louis, November 10-13, inclusive. This year the scientific session begins on Monday and closes on Thursday. We believe this change will insure a better attendance, especially on the last day of the meeting. For scientific medicine in pure form the Southern Medical is not to be excelled. A doctor can get the very latest and most dependable results from research and from clinical observation in this association. The discussions are free and democratic. The fellowship is not to be surpassed. Pleasure can be combined with profit in a big way at the St. Louis meeting.

Saint Louis is a centrally located medical mecca that has the physical accommodations and the fraternal spirit to entertain in superlative fashion. It is accessible to Mississippi by fine train, plane or concrete roads. Southern doctors love the Southern Medical Association. The influence of Mississippi doctors has been a strong factor for good in this association. Let not our love lose any of its ardor or appreciation. Attend the meeting next month in the city that joins the North and the South.

The Mississippi Public Health Association will hold its sixth annual session at the Heidelberg Hotel in Jackson. November 5-7. Miss Opal Regan, R. N., of Meridian will preside as president. Presidents preceding Miss Regan are Dr. H. C. Ricks, Dr. Felix J. Underwood, Mr. H. A. Kroeze, Dr. F. Michael Smith and Dr. W. H. Cleveland. It is a volunteer organization of Public Health Workers. Its object is to protect and promote public and personal health in Mississippi. It meets once a year in the capital city. It will have a larger attendance at its next session perhaps than the state medical association.

Miss Regan is the first public health nurse to be elected president of this organization. She is a native of Liberty, Mississippi, a graduate of the Magnolia High School, and Touro Infirmary School of Nursing, New Orleans. Her first position was at Newcomb College in New Orleans. She entered public health nursing in 1929 in the romantic Evangeline section of Louisiana, later she served with the Lauderdale County Health Department from 1931 to 1936. She has done graduate work in Vanderbilt and in Columbia universities, served as advisory nurse with the field unit in the state health department, and is now supervising nurse in the Lauderdale County Health Department. Mississippi is proud of Miss Regan's work. She is serving with distinction in one of the most efficient public health organizations in the nation.

Miss Regan has arranged for an unusually strong program for the coming November meeting. In addition to able public health leaders in Mississippi the following out-of-state guest speakers will take part on the program:

Dr. John F. Kendrick, Raleigh, N. C.; Mrs. Gertrude Carlsrud Henning, R. N., Minneapolis, Minn.; Lt. Colonel Leland O. W. Moore, Camp Shelby; Colonel Thos. L. Ferenbaugh, Camp Shelby; Mr. E. C. Sullivan, New Orleans, La.; Mr. J. J. Bloomfield, Bethesda, Md.; Dr. L. L. Lumsden, New Orleans, La.; Mr. John P. White, New Orleans, La.; Dr. Walter Wilkins, Raleigh, N. C.

A most interesting meeting of the Thirteen Counties Society was held in Aberdeen on September 9. The program was unusually good and the attendance was satisfactory. Outstanding members from every section of the district, largely the same members who attend all the meetings, were there. A crisis certainly confronts the profession, and unless there shall be more interest and coöperation on the part of all the members of organized medicine, catastrophe is just ahead. It seems that it is unfair to expect a small percentage of the members to carry the whole burden. It should be "each for all and all for each," and interest and service should be voluntary since there is no way to draft members into line of duty. However the pleasure and benefit to be derived from active participation in these meetings should be ample incentive to stir every member to get in line and do his duty though the heavens fall.

The out-of-state guest speaker on this program was Dr. J. T. Nix, of New Orleans. He is professor of surgery, L. S. U. Medical School. He is not only a renowned surgeon but he is a most pleasing speaker. He is, also, an exceedingly pleasant gentleman, a man of very human and gentle attributes. He made large sacrifices to pay us that visit and give us an address so scholarly and timely. He dealt with the general subject of cancer and I trust that, when it shall appear in print, no subscriber of this journal will fail to read it carefully. There were other very fine papers presented at this meeting, one by Dr. Moore of the University of Mississippi faculty, which was very fine; two others by young men, Dr. Travis, of Corinth, and Dr. McClanahan, of Columbus, added much to the value of the program. Dr. McClanahan has had considerable teaching experience and this puts him to good advantage when presenting a scientific paper. His subject was "polio" and its diagnosis and treatment. Dr. Fatheree, of West Point, another new member, added much to the program also. It is very comforting to have these new and young members display a willingness to help in the work that this society has sponsored for many years.

* * *

Dr. Ewing is back at home and is hard at work again. He seems to have been greatly benefited by his hospital stay and surgical treatment. His friends at home are glad to have him back in his familiar haunts.

* * *

The graduating exercises for the nurses' training school of the Gilmore Sanitarium were conducted at the Amory Methodist church Sunday night, September 21. Five fine, well-balanced and well-trained young women received diplomas on that occasion. Dr. V. B. Philpot, of Houston, delivered the graduating address, a good address and splendidly delivered. I doubt if there is a man in Mississippi whose contacts with nurses and hospitals have been more intimate than Dr. Philpot's. He organized and built and has had the responsibility of running the Houston Hospital which is now recognized as one of the best small hospitals in the entire country.

* * *

The last quarterly meeting of the Thirteen Counties Society for the current year will be held in Houston on the second Tuesday in December. This will be our annual meeting at which time the work for the next year will be outlined and determined. Houston is a great place to go. I am sure the doctors and the citizens will excel themselves on the occasion of this Christmas meeting. Surely no urging or special invitation is necessary in the case of any member who is progressive and conscientious. It will be disappointing if a record-breaking attendance does not mark this meeting. Mark your calendar, the second Tuesday in December.

—G. S. B.

News and Comments

MISSISSIPPI STATE MEDICAL ASSOCIATION

AUGUSTUS STREET, M.D., President
VICKSBURG, MISSISSIPPI

A message from Dr. A. Street, President of Mississippi State Medical Association to the secretaries of all component medical societies in the state:

I am mailing you under separate cover copies of Medical Division Bulletin No. 1 issued by the Office of Civilian Defense.

The present trend of events seems to be moving our country progressively nearer to military action. We do not know that our nation will or will not be subjected to ruthless enemy attack and devastation of civilian disasters; but it may be. So long as this possibility exists, I am certain that the members of our medical societies will avail themselves of all measures designed to increase their ability to serve in event of disaster. It can reasonably be assumed that in event of sustained sea or air attack, comparable to those occurring abroad today, the military would be largely in control.

As I understand it, our members are to coöperate with the local chapters of the American Red Cross, with the Civilian Defense Council, and other organizations in planning and executing a program of civilian defense.

The American National Red Cross is the greatest disaster relief organization in the World. It has funds and supplies on hand now. It has a corps of experienced executives and trained workers capable of administering disaster relief. While our Civilian Defense Council is composed of loyal men and women, ready and willing to serve, so far as I know the Civilian Defense Council has not now funds or materials.

It appears obvious that in addition to familiarzing ourselves as physicians with the care of casualties that may result from enemy attack, we can also render a service by encouraging our communities to expand their local Red Cross chapters, and to support the American National Red Cross, in order to enable that organization to keep up its supply of materials, maintain its trained personnel, and be ready to function whenever emergencies arise.

I quote from the recent joint statement of Mayor F. H. LaGuardia, National Director of Civilian Defense and Norman Davis, Chairman of American National Red Cross: "The office of civilian defense is the official government agency to assure effective coördination of federal relations with state and local governments engaged in defense activities, to provide for necessary coöperation with state and local governments in respect to measures for adequate protection of the civilian population in emergency periods, to facilitate constructive civilian participation in the defense program, and to sustain national morale."

The American National Red Cross is the responsible agency for relief of suffering caused by disaster both in peace time and in the national defense emergency, by providing food, clothing, shelter, medical and nursing care and other basic necessities. Therefore Red Cross Disaster Relief Service, nationally and in local chapters, will serve in emergency care and rehabilitation of individuals and families suffering from disaster caused by belligerent action during the national defense emergency in coöperation with governmental agencies—national, state, and local. In rescue work and emergency medical service caused by belligerent action for which the Office of Civilian Defense assumes leadership and responsibility, the Red Cross will make its services available as needed.

The Red Cross acts a medium of communication between the people of the United States of America and their army and navy. Cases of active service and ex-service men and their families should be referred to the Red Cross which is responsible for providing or securing the service and assistance needed. In carrying these services the Red Cross makes maxmum use of other community resources.

Training of Office of Civilian Defense workers in first aid and nurse's aide service is provided by the Red Cross through its programs of training in first aid and nurse's aide courses. The recognized service of the Red Cross in training industrial workers and others in first aid is drawn upon.

The Red Cross, through its chairman as a member of the Civilian Protection Board, has made available all of its services as needed by the Office of Civilian Defense, both national and local.

Councils of Defense and Red Cross chapters in their civilian defense activities should develop their local plans of coöperation in accord with this joint statement of responsibility.

If the defense committee of your society has not already done so, it might do well to write the American National Red Cross, 17th and D Streets, Washington, D. C., and purchase at small expense to your society one or more copies of all of the publications the Red Cross or the Red Cross and Civilian Defense Council have compiled relating to the medical and first aid division of the modern civilian defense. The purpose is for your committee to become informed and to be able to pass on to your society any medical information, not common medical knowledge, that may be derived from these publications. Also, this committee might collect such information from all other available sources for the same purpose.

National Director LaGuardia states that we will receive additional bulletins from time to time, amplifying details of the program.

The Mississippi State Medical Association is committed to the purpose of serving our people and our country faithfully. Our doctors have responded willingly and unselfishly when called upon in the past. The present emergency presents another opportunity to serve. Some have the privilege of entering army service, others will aid in safeguarding civilian health and welfare.

With all good wishes to you and to the members of your society,

Sincerely yours,

A. STREET, M.D.

MID-SOUTH POSTGRADUATE MEDICAL ASSEMBLY

The following additional speakers have agreed to appear on the program for the Mid-South Postgraduate Medical Assembly:

Dr. B. B. Crohn, Medicine—New York, N. Y.
Dr. F. L. Lederer, A. L. R.—Chicago, Ill.
Dr. Stanley Gibson, Pediatrics — Chicago Ill.
Dr. H. F. Kane, Obstetrics—Washington, D. C.
Dr. F. N. Wilson, Medicine—Ann Arbor, Mich.
Dr. W. T. Dannreuther, Gynecology—New York, N .Y.
Dr. A. D. Ruedemann, Ophthalmology — Cleveland Ohio.
Dr. J. A. Key, Orthopedics—St. Louis, Mo.
Dr. W. H. Cole, Surgery—Chicago, Ill.

NOTICE TO NURSES

The Civil Service Commission has announced a special examination to recruit nurses for work in the Panama Canal. No written tests will be given and applications will be accepted at the Commission's Washington office. Entrance salary is $168.25 per month with provision for promotions at stated intervals. A deduction of $10.00 a month is made for subsistence and quarters which are available for single women only. An additional 5 per cent deduction is made toward a retirement annuity. Further information and application forms may be obtained from any first- or second-class post office or from the central office in Washington, D. C.

COMING MEDICAL MEETINGS

Southern Medical Association—St. Louis, Mo., November 10-13.

American College of Physicians—St. Paul, Minn., April 20-24, 1942.

Second American Congress on Obstetrics and Gynecology—St. Louis, Mo. April 6-10, 1942.

Fourth Annual Forum on Allergy—Detroit, Mich. Jan 10, 11, 1942.

IT'S V FOR VICTORY

From President to private,
By land and sky and sea,
Democracy defending,
It's V for Victory.

From every lawyer's office,
From every battle field,
From every press and pulpit,
Be righteous wrath revealed.

Let farmers and physicians,
Our mines, our shops, our mills,
Let every man and woman
With iron in their wills

In solemn declarations,
Pledge honor, fortune, life,
With God Almighty guiding,
To stand through storm and strife,

Till every trampled nation
Forever shall be free.
Defeat for every despot,
It's V for Victory.

David E. Guyton,
BLUE MOUNTAIN, MISSISSIPPI.

(Written for The Mississippi Doctor)

ENGLISH PSYCHIATRIST TO LECTURE

Final dates for the Salmon Memorial Lectures which Dr. Robert D. Gillespie, psychiatric specialist of the British Royal Air Force, will deliver in key cities of this country and Canada, have been announced by Dr. C. Charles Burlingame, chairman of the Salmon Committee on Psychiatry and Mental Hygiene.

Dr. Gillespie has received special leave of absence from the RAF from the British government for the express purpose of delivering the Salmon Lectures in this country and Canada. He will fly here to make a first-hand report to members of the American medical profession and officers of the United States Army and Navy Morale Division on the psychological effects of "Blitz" warfare on civilian and armed forces. His schedule includes New York, Detroit, Chicago, Washington, San Francisco, New Orleans, and Philadelphia. He will lecture in New Orleans Nov. 22, sponsored by the leading medical groups there.

Dr. Gillespie's observations made under actual war conditions are expected to be of inestimable value to American psychiatrists in formulating plans for maintaining civilian morale in wartime. He will discuss the problems of psychiatry in national defense under the title "Psychoneuroses in Peace and War and the Future of Human Relationship."

At the meeting of the Tri-State Medical Society at El Dorado, Ark., Dr. Allen Collom of Texarkana was named president to succeed Dr. R. B. Robins of Camden. The following state vice-presidents were named: Dr. Joe E. Wharton, Jr., El Dorado; Dr. Joe Nichols, Atlanta, Texas, and Dr. J. P. Saunders, Caspiana, La., Dr. Garland Rushing of Longview, Texas, was selected secretary-treasurer.

The Coast Clinical Society held its annual meeting at Pensacola, Florida, on October 16 and 17. It has been furnishing some very fine programs. Dr. E. C. Parker, of Gulfport, is a past-president and a very active promoter of the society.

Dr. Virginia Small has recently been added to the staff of Gamble Brothers and Archer Clinic. She will be at the head of the department of diseases of children. W. L. Stroupe, D.D., has also been placed in charge of dental surgery.

The fiftieth anniversary meeting of the Association of Military Surgeons of the United States will meet at Louisville, Ky., at the Brown Hotel, October 29. Problems of military and civil defense will be discussed. Mechanized equipment will be demonstrated at Ft. Knox on Thursday, October 30.

At the semi-annual session of the Arkansas Medical Society of the Second District at Batesville, Ark., October 13, Dr. Fay H. Jones, of Little Rock, president, emphasized "cooperation" as the keynote of his administration. He stressed a closer relation between the county groups and between individuals. He also dwelt on the part of physcians in regard to the emergency medical service for civilian defense.

Deaths

Dr. Jefferson B. Mooney, prominent physician of Scooba, Miss., died at the Veterans Hospital in Gulfport Aug. 10, 1941. Dr. Mooney was born in Choctaw County, Ala., April 11, 1880. He was gratuated from Tulane University in 1908. Funeral services were held from the Presbyterian church with interment in Scooba cemetery. Surviving are one daughter, Mrs. O. T. Baker, Scooba; one son R. J. Mooney Meridian; two sisters, three brothers and one granddaughter.

Dr. Elison Holmes Williamson, 61, died at his home in Soso, Miss., July 26, 1941. Dr. Williamson was born in Choctaw County, Ala. April 11, 1880. He was graduated from Tulane University in 1909, and during the World War served a thirteen-month period in France with the American Expeditionary Forces. He practiced at Ovett for two years, then resided at Soso, where he had practiced for thirty-one years. He had served as steward in the Methodist church for 26 years; was a member of the Eastern Star; the Scottish Rite Masonic organization; was commander of the Doyle Kervin Post No. 102, American Legion. He was a member of the South Mississippi and American Medical Association. He is survived by his wife, one son, two brothers and one sister.

Dr. Winfield Wardlow Cox, practicing physician of Gulfport for 17 years, died at the King's Daughters Hospital, Sept. 7, 1941, following an illness of ten days. Dr. Cox practiced medicine in Lyman for about 15 years before moving to Gulfport to live. He was born at Beatrice, Miss. Sept. 25, 1880. He received his medical education at Memphis Hospital Medical College, graduating in 1904. Dr. Cox was a 32nd degree Mason. He is survived by his wife, two sons, Dr. Cody A. Cox, Morton, Ill. and W. W. Cox, Jr., two daughters, Mrs. R. N. Cahill, Gulfport, and Miss Minnie Gay Cox, Washington, D. C.

Dr. James R. Plummer, age 55, died at the Baptist Hospital in Jackson, following a heart attack. Dr. Plummer suffered from heart trouble for several years and was recently a patient in the Veterans's Hospital in Biloxi. For several weeks he had rested at his home and appeared to be improving. His death came as a sudden shock to his many friends. Dr. Plummer was born in Huntsville, Ark., May 12, 1884. He received his medical education at Barnes Medical College, St. Louis, Mo., graduating in 1910. For the past five years Dr. Plummer had lived in Forest and, since the passage of the Selective Service Act, had served as examining physician for local draftees. He served as major in the First World War, in the medical corps of the U. S. Army from 1915 to 1919. He was a member of the State Medical Association, and also the Central Mississippi Medical Association. Surviving are his wife and two daughters. Funeral was held at the residence in Forest with interment in Hickory Cemetery.

Dr. John Frick, native Memphian who helped in the struggle against yellow fever in Cuba after the Spanish-American War, died at the St Joseph Hospital at Memphis, Sept. 19. He was 75 years of age.

He was educated at the Lutheran School, part of the Lutheran Church at Memphis, and studied medicine at a Lutheran college in Fort Wayne, Ind. He served his internship at the old General Hospital at Memphis; served as acting surgeon in the Marine Corps, during Spanish-American War. He is survived by two daughters and three sons. Funeral was held at National Funeral Home with interment in Elmwood Cemetery at Memphis.

Dr. W. T. King, 77, was killed Wednesday afternoon, Sept. 24., when struck by a northbound Y. & M. V. local freight. Dr. King had been practicing in Shaw, Miss. for 25 years. He was a native of Lankser, Pa., and a graduate of Franklin and Marshall College. He was at one time a medical missionary in Oklahoma. He was prominent in church and Masonic circles and was a 33rd degree Mason. He is survived by his wife, Mrs. Ida Keith King, four daughters, Mrs. Anna Crysler, Mrs. H. P. Harris. Mrs. J. H. Commer, and Mrs. J. S. Ray; and three sons, Walker, Keith and Sam

Dr. William F. Bolton died at his home in Vacherie, La., Sept. 24, following a heart attack. Dr. Bolton was a native of Clay County. He was graduated from Mississippi State College and received his M.D. degree from Tulane Medical College. He is survived by his wife, Mrs. Willie Neal Bolton, two sons, James W. Bolton and Lieut. William Bolton and four daughters, Mrs. Wexler White, Mrs. Robert Waltz, Mrs. J. E. Scott and Mrs. Harold Waguespack. Funeral services were held at Starkville with burial in Odd Fellows Cemetery.

Dr. John L. Gandy, resident of Hickory, died at Anderson's Infirmary at Meridian, Sept. 26. Funeral services were held Tuesday at the Fellowship Church near Hickory. Surviving are his five sons, two daughters, two brothers and four sisters.

Dr. Grover Cleveland Terrell, 56, for many years a practicing physician at Prentiss and in Jeff Davis County, died at his home, Sept. 26, following injuries received in an automobile wreck. Dr. Terrell was the son of the late Dr. J. D. Terrell, one of the pioneer physicians in south Mississippi. He received his education at Millsaps College and Tulane University. He served as county health officer for a number of years and was a director in the Bank of Blountville and a member of the Methodist church. He is survived by his wife, one son, Dr. Kenneth G. Terrell, a daughter, Mrs. B. G. Walden, Jr., three brothers and two sisters.

Book Reviews

The third edition of "The Care of the Aged", by Thewlis, published by C. V. Mosby Company, is off the press. The first edition appeared in 1919, the second seventeen years later, but this is still the only recent book dealing with the medical care of the aged. The subject of geriatrics is increasing in importance because more people are living to be sixty years of age and more. The author points out that dealing with the aged is becoming a specialty. The field has been neglected. As the child has special problems in sickness so does the aged.

The book is divided into five sections: general considerations, miscellaneous medical problems, specific infections, non-infectious diseases, and pathological infections. Treatment has been outlined in some diseases more or less in detail because they have been overlooked by many physicians caring for the aged. Each chapter in the book is written so that one may be read at a time and found interesting and profitable. This third edition has been entirely rewritten, carrying fifty illustrations. It has 579 pages.

This revised edition of the book is very timely and it does seem that it should be read by every doctor practicing medicine, both specialist and practitioner.

The Art and Science of Nutrition, by Estelle E. Hawley, Ph.D., and Grace Carden, B.S., the University of Rochester, School of Medicine and Dentistry, Rochester, N. Y. Published by C. V. Mosby Company. $3.50.

This book has the nurse in mind foremostly, for on her falls the responsibility of dietary management, tempting and nourishing food for her patient. Her training is not complete today unless she knows the relation of diet to specific disease conditions. Recovery from any condition of disease hinges on the nutritional status of the patient.

In order to give a clearly understandable discourse on the art and science of nutrition, the authors start with the first observations in history of the relations of food to health. Digestion, metabolism, blood and lymph, and the endocrines are concisely explained, frequently illustrated with charts and pictures. Then a detailed classification of foods follows, with accompanying charts showing composition of various food materials.

The authors go from the known to the unknown in method. They give the normal picture, and show how the abnormal develops by subtraction of necessary food materials. Menus, directions for selecting foods, their preparation and methods of serving are given in detail. Diets are made out for various disorders and diseases, for children and for adults. Tables show composition of most edible foods, with calorie content.

Every teacher will welcome this book for nurses' training, and it will be a boon to the busy physician who can trust his nurse to understand dietary treatment.

Every surgeon will be interested in the newest of the Mosby synoptical series—*Synopsis of the Preparation and Aftercare of Surgical Patients,* by Ilgenfritz, Penick, and Maes, all of New Orleans. It is just off the press. Price $5.00.

It is amazing the amount of definite, concise, dependable and valuable information this book contains. It has 532 pages with fifty-five illustrations. In brief, it is a summary of the most useful knowledge available on preoperative and aftercare of the surgical patient. The pathologic process back of each complication is given due consideration and the physiological basis for treatment is explained. Controversial points have been left off. Recent laboratory tests are described in full. The authors have given in detail their preferences in therapeutic procedure, and where space would permit, those of others as well. Mention has been made of drugs that will be in general use in the near future, but are not yet available. The book is divided into twenty chapters and concluded with an appendix carrying valuable information on the newer chemotherapeutic agents, diet lists, preparation for x-ray studies, oxygen administration and a table of blood chemistry values. We deem it one of the best books for use in surgical practice issued this year.

MISSISSIPPI PHYSICIANS NOW IN ARMY SERVICE

Name	Residence Before Entering Army	Present Location
Armstrong, J. H.	Oxford	Camp Blanding, Florida
Baines, T. A.	Jackson	Camp Blanding, Florida
Bramlett, E. V.	Oxford	Camp Jackson, S. C.
Bolton, E. L.	Biloxi	Camp Blanding, Florida
Canizaro, Vito J.	Vicksburg	Fort Jackson, S. C.
Berman, Maxwell D.	Jackson	Camp Shelby, Miss.
Bush, E. A.	Laurel	Camp Blanding, Florida
Dale, S. C.	Jackson	Camp Beauregard, La.
Dabney, W. M.	Okolona	Fort Jackson, S. C.
Cohen, Emanuel	Pace	
Dorris, H. C.	Winona	Camp Blanding, Florida
Dyer, J. D.	Houston	Fort Bragg, N. C.
Eddleman, T. S.	Jackson	Camp Claiborne, La.
Eubanks, G. W.	Greenville	Camp Blanding, Florida
Faulkner, Roscoe	Batesville	Fort Bragg, N. C.
Fox, J. H.	Jackson	Camp Blanding, Florida
Freedman, H. D.	Senatobia	Fort McClelland, Ala.
Hand, B. F.	Greenville	Camp Blanding, Florida
Hicks, G. Y.	Vicksburg	San Antonio Texas Camp
House, N. C.	Belzoni	Selective Service, Jackson
Howell, J. B. Jr.	Canton	Fort Bragg, N. C.
Hudson, L. B.	Hattiesburg	Camp Blanding, Florida
Hull, J. A.	Indianola	
Hutchins, J. D.	Crystal Springs	
Jenkins, C. R.	Ellisville	Camp Blanding, Florida
Johnson, C. C.	Greenville	Maxwell Field, Ala.
Johnston, W. E.	Vicksburg	Camp Blanding, Florida
Jones, W. C.	Indianola	
Kendall, N. F.	Jackson	Camp Blanding, Florida
Lamb, R. D.	Kosciusko	Camp Blanding, Florida
Logan, J. G.	Natchez	
Long, L. W.	Jackson	Selective Service, Jackson
Massengill, R. C.	Brookhaven	Camp Shelby, Miss.
McKinnon, Joe	Hattiesburg	Jacksonville, Fla.
Merriam, L. B.	Waynesboro	Camp Blanding, Florida
Mitchell, C. B.	Starkville	Camp Shelby, Miss.
Moorhead, R. J.	Yazoo City	Carlisle Barracks, Pa.
Morrison, M. E.	Oxford	
Moseley, L. B.	Jackson	Navy, South Carolina
Myers, O. P.	Indianola	Fort McClellan, Ala.
McCalip, H. L.	Yazoo City	Camp Blanding, Florida
McCarthy, A. M.	Electric Mills	Fort Benning, Ga.
McNair, S. S.	Jackson	Navy, Florida
Noblin, W. E., Jr.	Jackson	Camp Blanding, Florida
Pritchard, C. D.	Lambert	Camp Shelby, Miss.
Purser, Thomas, Jr.	McComb	Camp Blanding, Florida
Ramsey, F. L.	Laurel	Camp Blanding, Florida
Ray, R. B.	Kosciusko	Camp Blanding, Florida
Robbins, E. P.	Brookhaven	Camp Claiborne, La.
Saunders, J. H.	Laurel	
Simpson, R. K.	Macon	Camp Blanding, Fla.
Sims, M. M.	Oxford	
Slaughter, W. J.	Dekalb	Camp Beauregard, La.
Sneed, Ralph	Jackson	Camp in West Virginia
Smith, R. W.	Canton	Camp Blanding, Florida
Warriner, R. B., Jr.	Corinth	Camp Jackson, S. C.
Westerfield, J. A.	Merigold	Camp Beauregard, La.
Williams, H. S. Sr.	Jackson	Camp Blanding, Florida
Williams, J. W.	Greenville	Camp Blanding, Florida
Windham, J. E.	Kosciusko	Camp Shelby, Miss.

Mississippi State Medical Association

Organized 1867 **Next Meeting: May 12, 13, 14,1942, Jackson**

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COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	W. R. Brumfield, Gloster	Anderson Butler, Liberty	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. A. Slack, Friars Point	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	C. A. Kirk, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	H. L. Scales, Jr., Starkville	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr.,Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	C. E. Catchings, Woodville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Eye—S. S. McNair, Jackson.

Ear, Nose and Throat — Alston Callahan, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

EYE

INTERSTITIAL KERATITIS—Klauder and Van Doren

ARCHIVES OF OPHTHALMOLOGY,
Sept. 1941. Page 408

A series of 532 cases of interstitial keratitis, all of the patients having congenital syphilis, are presented. 75% of the cases were white, and ages ranged from 3½ to 30 years, with the greatest age incidence at 13 years. In about half the cases, the condition became bilateral, though the sooner the treatment was begun, the less the likelihood of affection of the other eye.

Routine treatment consisted of administration of an arsenical in conjunction with a heavy metal. Active cases were treated with a median of 21 injections of an arsenical and 51 injections of a heavy metal (or weeks of mercury inunctions); and those with inactive interstitial keratitis, a median of 21 injections of an arsenical and 44 injections of a heavy metal. About half the cases were given iodides, usually potassium iodide orally. Fever therapy was administered to 127 of the cases, typhoid being the most common method, but malaria and mechanically induced methods were also employed.

The treatment administered in the inactive stage of interstitial keratitis was of limited value in improving visual acuity. Arsphenamine and neo-arsphenamine obtained approximately the same results, and the poor vision in those cases which did receive at least 20 injections of an arsenical in the active stage emphasized their value.

A surprising finding of the carefully controlled studies was that the administration of iodides unfavorably influenced final visual acuity both in active and inactive interstitial keratitis.

Routine treatment supplemented with fever therapy was superior to routine injections alone and far superior to routine injections with iodides. Continuous treatment gave much better final visual acuity than did intermittent or regular methods.

DISCUSSION

So great is the incidence of interstitial keratitis in Mississippi that in the course of a few years any ophthalmologist could collect an equal or greater number of cases. So widespread is syphilis among negroes in our state that many physicians are tempted to make such diagnoses from the color of the skin.

In one very large industrial plant in our vicinity, we routinely give an injection of bismuth in all cases of severe ocular injury, or in cases in which foreign bodies have penetrated into the corneal parenchyma, if any iritis is showing, without waiting for the return of the Kline-Young test. Doubtless some cases thus receive bismuth where it is not necessary, but it does them no harm. and there are many cases of interstitial keratitis which are thus kept from developing for a few days, while the serological tests can be made. As soon as a positive reaction is obtained, the arsenicals are brought to bear and in a period of two weeks the cornea has cleared. The atropine is then discontinued, the worker allowed to return to the plant. The company collects from the diseased employee's wages a nominal weekly sum, which pays for the continuation of anti-syphilitic treatment.

The greatest impediment to syphilitic control is lack of education, and every ophthalmologist's and otolaryngologist's—to say nothing of all general practitioners'—files contain record after record of inadequately treated syphilis.

Pending the saturation of the intelligence of the general public with sufficient knowledge, some type of legal enforcement of treatment might be deemed advisable.

PEDIATRICS

The Frequency of Umbilical Herniae In Negro Infants—J. W. Jones Archives of Pediatrics, 58-249 (May) 1941.

"The writer's attention was first attached to the frequency of umbilical herniae in Negroes when he was doing postgraduate work in pediatrics at Harvard Medical School in 1928. He noticed then that although Negro and white infants received the same prenatal care, the same care of the cord, and the same postnatal care at Boston Lying-In Hospital, invariably the Negro infant would develop a hernia, while only rarely such a condition developed in the white infant.

In speaking of umbilical hernia, the writer has in mind the acquired type. It is noted that the cord should have come off and the stump fairly healed in from ten to fifteen days. Often after healing a protrusion of the umbilicus is noted. The author states that this umbilical opening is one of the weak spots in the abdominal wall and readily permits protrusion of a hernial sac. It is observed that in most cases an opening can be felt in this location, and when the infant cries or strains, the size of the hernia is increased. These herniae may vary in size from the tip of the finger to a baseball.

The author says that "As a rule most of these openings will close if kept strapped with adhesive. The method of treatment at the George W. Hubbard Hospital of Meharry Medical College consists of taking a fold of skin and making a pleat over the hernia and then strapping usually with 2-inch adhesive. If the hernia is large, 3-inch adhesive is used and reinforcements may be used with two or three pieces, depending on the size of the hernia. Some physicians think that most of these herniae will correct themselves, whether or not they are strapped. The writer is not so optimistic. A large percentage of the cases will heal even if they are strapped, and surgical intervention is necessary.

"In an effort to determine how common the condition was in Negro infants, the writer sent a questionnaire to a number of leading pediatricians. All of these reported a higher incidence of umbilical herniae in Negro than in white infants.

"The condition is so common in colored clinics and on the wards that one does not bother to make a diagnosis of umbilical hernia unless the hernia is exceedingly large. At least 80 per cent of the infants that the writer sees have some form of umbilical herniae. It is the rare exception when he sees an infant with a normal umbilicus.

"Various etiologic factors have been suggested, among them rickets, malnutrition, syphilis, and tuberculosis, but there is little or no proof that any of these are responsible for the condition.

"The writer concludes that umbilical herniae are more common in Negro infants than in white infants . . . —Just why the condition is more common in Negro infants than in white infants is not definitely known."

COMMENTS

The writer is impressed that there are a great many more umbilical herniae in Negroes than white newborns. I am also impressed with the fact that herniae found in Negroes are as a rule much larger than those found in white infants. There are a great many more herniae in all infants, white and colored, that should have adequate treatment. Simply sticking adhesive over the hernia will do no good at all, but with the proper technique of folding the skin over the opening and correct application of adhesive will cure practically all of them.

PRESENT STATUS OF THE TUBERCULIN PATCH TEST—CAMILLE KERESZTURI

American Review of Tuberculosis, 44:94 (July) 1941

The authors make the statement that "the tuberculin test is one of the most important adjuncts in the control of tuberculosis." In their opinion "the intracutaneous test of Mantoux has stood best the test of time." However, it is said that "In spite of the satisfactory character of the Mantoux test, there has been a continuous search for a tuberculin test which eliminates the process of injection."

The patch tuberculin test of Vollmer first described in 1937 has aroused considerable attention and popularity in the United States.

It was found in comparing the values of the Mantoux to the patch test that there was considerable variability among the findings of different authors. The author says that "The present combined data show that 15 per cent of Mantoux-positive subjects have exhibited a negative test, that 3 per cent of Mantoux-negative subjects have given a positive patch test."

The author's personal experience with the Vollmer patch test and Mantoux test on 379 school children showed that 27 per cent of Mantoux-positive subjects exhibited a negative patch test while 11 per cent of Mantoux-negative subjects gave a positive patch test.

The author admits that "The patch test is capable of highly reliable results when performed under ideal conditions. Some of these conditions can be controlled by care in applying the test, but unfortunately some, which depend on the coöperation of the subject, the season of the year, and other factors influencing perspiration, cannot be controlled and will remain as causes of discrepant results."

The writer considers the patch test unreliable from the standpoint of the degree of allergy exhibited by the subjects on whom the tests were performed. In his series there were 59 instances of contradiction between the two types of tuberculin test. It is admitted that undoubtedly in its present form and with the present criteria for reading, the patch test will disclose the presence of tuberculous infection in cases where the Mantoux test has failed, but it also follows for the same reason that it will label as tuberculous a certain number of subjects in whom no infection is present.

The writers conclude therefore that "In viewing both types of unreliable reactions collectively, it is clear that any attempt to decrease the incidence of false positive reactions by assuming a more conservative attitude in interpreting mild reactions must also increase the incidence of failure to identify the presence of infection. Undoubtedl va more rational method of interpretation can be reached. presence of infection. Undoubtedly a more rarived when the time proven Mantoux test can be replaced by an equally reliable contact test."

COMMENTS: There is danger of the impression being gained by reading this abstract that the patch test is of little value, but this is not true. The patch test is a most valuable one if properly performed; and if found positive, it should always be checked by the Mantoux test. In my experience it has been found to be very accurate and when positive, comparable in value to that of the Mantoux test.

H. F. G.

PUBLIC HEALTH

THE PUBLIC HEALTH APPROACH TO THE CONTROL OF DIARRHEA AND ENTERITIS IN INFANTS, by L. C. Cox and L. P. Walter, Tex. State J. Med. 37: 304-308, August, 1941.

The once commonly recognized barometer of community health, typhoid fever, has been succeeded for the present by diarrhea and enteritis, state the authors. In 1938 there were 14,107 deaths from diarrhea and enteritis in the United States among persons under two years of age. Texas recorded 1,550 of these, and seriousness of the problem may be appreciated by the fact that "for every death reported there were probably 30 cases of the illness which did not end fatally."

During epidemics of these diseases public interest runs high and many excessive and unreasonable demands are made upon the health authorities and private physicians. Yet once the crisis is over, it is strange how completely and how suddenly public sentiment can change from intolerant and precipitate demands for reform to complacent apathy and indifference.

The various causes of diarrhea, or disturbed function, are listed as follows: overfeeding, food unbalance, irritating foods, food allergy, laxatives, poisons, bacteria, viruses Amoeba histolytica, molds, and parasites. There is great variation found in the type of organism reported as the cause of diarrhea and enteritis. Excessive numbers of saprophytes or simple bacterial over-growth in water, milk and food, cause many serious cases which result in death. Among the pathogenic organisms, the Flexner strain of dysentery bacilli has been reported most frequently in the United States.

Epidemics of diarrhea and enteritis are not limited usually to any one age group. All who consume the infectious or toxic material may be involved. When an epidemic occurs in a community with safe water supplies. the cause may be some form of food poisoning. A sample of the suspected food should be examined for organisms of the paratyphoid-dysentery groups and for staphylococci or staphylococcus toxin.

Most deaths are noted to occur in the poor urban and rural areas where there is faulty environmental sanitation, such as over-crowded houses, with bad plumbing and insanitary toilets. Widespread application of the following measures would mean much toward *prevention* of these diseases: (1.) General improvement of environmental sanitation. (2) Provision of a safe water supply. (3.) Pasteurization and sterilization of milk. (4.) Proper diet. (5.) Protection from flies. (6.) Isolation of cases. (7.) The progressive education of mothers in the importance of breast feeding and in infant care and hygiene.

Fundamental principles of treatment are given as follows: (1) Remove or correct the cause. (2.) Supply sufficient fluids. (3.) Put the gastro-intestinal tract at rest for a short period of time. (4.) Relieve the symptoms that arise, such as pain, tenesmus, and fever. (5.) After the short period of starvation, gradually return to the normal diet. Drugs are usually not necessary in mild casès, but paregoric, phenobarbital, or bismuth will give relief in some cases. No conclusion is reached as to the true therapeutic value of serum in the treatment of bacillary dysentery as few figures are available for cases so treated. The most promising member of the sulfonamides in treatment of this disease is called sulfaguanidine ("The guanidine analogue of sulfapyridine and sulfathiazole, which is fairly water soluble, is poorly absorbed from the intestinal tract and is experimentally active against various bacteria.").

SURGERY

HEPARIN ADMINISTRATION. METHODS AND RESULTS IN THIRTY CASES

Annals of Surgery, Volume 114. No. 2.

Author: Conrad R. Lam, M.D.

The author reports a total of thirty patients treated during the past two years by general heparinization. These patients were heparinized because of the presence of the following conditions:

(1) Postoperative embolism not immediately fatal—24 cases.

(2) Embolism of a peripheral artery with embolectomy—3 cases.

(3) Luetic thrombosis—1 case.

(4) Hemiplegia from occlusion of carotid artery—1 case.

(5) Phlebitis—1 case.

The gross results, which were in the main favorable, are summarized, and two deaths which occurred are analyzed. Of the fatalities, one apparently represented a failure of heparin in the dosage employed. Data pertinent to the several cases are presented and conclusions relative to the merits of the drug, and certain cautions to be used in its administration are recorded. The general plan is to, by means of a continuous intravenous drip, elevate the clotting time of the blood to an arbitrary level. (Ed. Comment—There is still a question as to what the ideal level actually is, in the hope that danger of clotting may be avoided. The author feels the ideal heparin reaction is to maintain the blood clotting time at about fifteen minutes. The complication of hemorrhage from the operative wound, which happened in four instances in this series, is discussed. The author concludes that heparin has a place in the treatment of thrombosis and that it is of even greater value in embolectomy and other kinds of blood vessel surgery. He wisely states that the drug has a definite value but that its use is not without hazard.)

THE LOCAL USE OF SULFANILAMIDE

Authors: Lawrence W. Long, M.D., and J. Gordon Dees, M.D.

Surgery, Volume 9, No. 6, Page 878.

An historical survey of this important subject is offered and of particular current interest are the authors' remarks relative to the value of sulfanilamide used locally, in war surgery as a prophylactic measure in the field.

Interesting tables are presented, indicating the degree of absorption of the drug following implantation in the wound at the time of radical mastectomy, its absorption rate from the normal peritoneum, from the peritoneum following drainage of appendiceal abscess, from the peritoneum in the presence of diffuse peritonitis and finally its absorption from the peritoneum following surgical procedures performed because of the presence of chronic pelvic infection.

The maximum concentration encountered in any of the cases cited was 19.5 milligrams per cent, the minimal 1.9 milligrams per cent. The authors feel that the ideal concentration varies from 6 to 10 milligrams per cent. They concluded further that the rate of absorption of the drug is dependent upon the vascularity of the area in which it is employed and that properly used no complications should be encountered.

PECTIN SOLUTION AS A BLOOD SUBSTITUTE

Authors: F. W. Hartman, M.D., Victor Schelling, Ph.D.,

Henry N. Harkins, M.D., and B. Brush, M.D.

Annals of Surgery, Volume 114, No. 2, Page 212.

The present urgent need for and difficulties of obtaining sufficiently large quantities of blood and blood plasma is discussed. A recent article of Taylor and Waters, in which are quoted as follows:

(a) The molecule of the dissolved substance must be of such size that the fluid will not leave the vessel too freely,

(b) The solution must exert an osmotic pressure and possess a viscosity approaching that of whole blood,

(c) Be as nearly as possible isotonic with the contents of erythrocytes,

(d) Be nonantigenic and innocuous.

The fluid obviously should be cheap and should be capable of being quickly and easily prepared.

Certain substances, notably isinglass and solution of gum acacia, have been suggested, but each has been found to have definite objections.

The authors suggest the use of one-half per cent pectin solution, which they have found to more nearly meet the requirements laid down by Taylor and Waters than any other substance previously proposed. Preparation of the solution is described and their experimental and clinical experiences with it are cited. The solution appears further to be valued in the management of peripheral vascular failure. There is temporary retention of pectin in the blood and liver but excretion of the unchanged material in the urine is rapid.

W. H. Parsons, M.D.

UROLOGY

STUDIES ON PROSTATIC CANCER—THE EFFECTS OF CASTRATION ON ADVANCED CARCINOMA OF THE PROSTATE GLAND.

Chas. Huggins, M.D. et al: Archives of Surgery, Volume 43, August, 1941.

In 21 cases castration was carried out for far advanced or metastatic carcinoma of the prostate; 4 patients died within eight months after the operation; in 2 cases the operation was done recently to allow deductions as to its efficacy, and in 15 cases appreciable clinical improvement occurred. The objective evidence of benefit after orchidectomy consisted of a great decrease in the levels of serum phosphatase in all but 2 cases, an increase in weight (and appetite), an increase in the red cells of the peripheral blood, a decrease in the amount of pain, shrinkage of the primary lesion, increased density of the metastatic lesions in the roentenograms and in 1 case improvement in neurologic signs of compression of the cauda equina by metastases. The improvement was greater than we have observed in any case in which far advanced or metastatic cancer was treated in any other way. It is certain that in many cases regression of the neoplasm is not complete.

Untoward effects of castration were temporary swelling of the ankles, development of hot flashes and abolition of sexual capacity. The hot flashes were eliminated by administering estrogen. Injections of androgen caused an increase of pain.

COMMENT

I have treated a limited number of patients with far advanced carcinoma of the prostate with metastasis by either castration or x-ray therapy over testicles and have been very much gratified by the results obtained. One patient was having a great deal of pain in region of either sciatic nerve and was having to walk on crutches. In two weeks following castration, he was able to walk without crutches and stated he was having practically no pain.

State Board of Health

Felix J. Underwood, M.D.

Dr. R. N. Whitfield, director of the Division of Vital Statistics of the Mississippi State Board of Health, wishes to make a special appeal to all physicians who attend births to make immediate report of each birth to the registrar.

If a birth certificate for each individual born in our state could be prepared immediately, this information would be of great service to the health departments in their maternal and infant programs.

Approximately seven hundred citizens are asking us each day for copies of their birth records. If the physician has fulfilled his obligation, we find the record. If not, it is necessary for us to state to the citizens that the attending physician neglected to file a record.

The immediate registration of births will go a long way toward the one hundred per cent goal which we wish to attain in registration.

Most of our registrars have the franking privilege and the physician can secure envelopes to mail certificates of birth to the registrars.

PHYSICIANS FOR MISSISSIPPI

An acute shortage of physicians to serve the civilian population of Mississippi is likely to result if military demands continue to mount, and unless a greater number of young physicians locate in the state to succeed those now rapidly approaching the retirement age. There seems to be no serious shortage of physicians, as yet, for the country as a whole —the problem is obviously one of distribution. It is apparent that there is genuine need to make the medical facilities of Mississippi more attractive. The general trend of physician distribution has been way from rural areas and toward the larger medical centers, with consequent lack of service for large sections of the population and diminished opportunities for many trained and competent physicians.

Mississippi has kept pace with other states in establishing laws to prohibit entrance of unqualified individuals into the field of medical practice and to maintain standards which will insure a good quality of service to the state's citizens. Since 1926, an average of 48 physicians have been licensed each year to practice in the state. However, a recent report[1] indicates that while the population has expanded approximately 79 per cent since 1886, the number of physicians has decreased 11 per cent.

How old are Mississippi physicians? The oldest is 90, the youngest 23, according to a recent study. Both are alone in their age groups.

Practicing what they preach has evidently added years to the lives of Mississippi physicians—because of the 1374 physicians in the state, 939 are over fifty years of age. Although a number are not in active practice, a large number of those beyond this age are still caring for a large number of patients.

Sixty-two and sixty-one seem to be the "peak" ages—there are more physicians in these age groups than any other—total 118.

But graphically the ages of physicians show an upward trend at thirty-two and downward at forty-two, reaching the lowest point at forty-six. What did the last war do for the medical profession? What happened to the boys who had chosen medicine and were taken out of school to become soldiers? The physicians who completed training in 1914-1918 are now in the age group of forty to forty-five and this group has a very small number. There are only twelve physicians in the state who are forty-five. There is a decided drop in the number of physicians and the cause might be attributed logically to the World War I.

Those who have reached the age of threescore years and ten total 168. Many of these physicians have practiced medicine riding horseback when country roads were nature made and often impassable in winter months. They have served humanity as perhaps no other group has done and now they are taking life a little easier and perhaps wondering what the age of "specialism" will bring to the human race. Diseases do not go on the rampage now as they did then. The medical profession has more remedies to offer for illnesses. However, the need for the physician is very great among a growing population.

Seventeen of the 435 who are now under fifty years of age will pass the fifty mark next year. Upon these men and those who have passed fifty devolves the task of caring for a population of more than two million people.

In these days of defense, we speak daily of conserving our "manpower," of having available the needed resources. Medically speaking, it might be well for the people of the state to begin thinking of the large number of young men who daily are turned aside from the study of medicine because of financial reasons. Will the picture change within the next ten years?

1. A. M. A. Council on Med. Education and Hospitals—"Hospitals and Medical Care in Mississippi," J.A.M.A. 112: 2317-2332. 1939.

COUNTY HEALTH NOTES

CLARKE-WAYNE

A full-time county health department was organized in Clarke-Wayne counties, the health services for these two counties being combined in a district, with headquarters at Shubuta, and sub-offices at Waynesboro and Quitman. On September 1, Dr. R. L. Wyatt became director. Doctor Wyatt is from Tupelo. He received his M.D. from the University of Tennessee, after which he interned in the John Gaston Hospital, Memphis. Prior to going to the Clarke-Wayne district he received training at the Lauderdale County Training Center. In addition to the health office there are three public nurses, a sanitation supervisor, and a clerk connected with the department.

KEMPER

The Kemper County Board of Supervisors organized a full-time county health department on September 1, with Dr. John R. Priest, Jr. as director. Doctor Priest if from Houston, Mississippi, where he has been in active practice for over three years. Prior to assuming the position as Director of the Kemper County Health Department he received special public health training in the Jones County Health Department under the direction of Dr. T. Paul Haney. In addition to the health officer the county department has a public health nurse, a sanitation supervisor, and a clerk. The Board of Supervisors of Kemper County are contemplating the construction of a health department office in the near future.

SIMPSON

On September 1, Dr. John G. Egger was appointed health officer of Simpson County. Doctor Egger is from West Point, Mississippi. He received his medical degree from the University of Tennessee, after which he interned at the Methodist Hospital, Dallas, Texas. Prior to his appointment as director of Simpson County's health department he received special public health training under the direction of Dr. Guy R. Post in Coahoma County. In addition to the health officer there are a sanitation supervisor, a public health nurse, and a clerk. In order that health department service may be readily available to citizens in the county, convenient and commodious sub-offices have been provided at Magee and Harrisville.

RANKIN

The Rankin County Health Department was organized on September 1, and Dr. William C. Beaver was appointed as health officer. Doctor Beaver, following his graduation from the University of Colorado School of Medicine and completing his internship in the St. Louis Hospital, spent several months with Dr. Andrew Hedmeg, director of the Sunflower County Health Department, where he received public health training. This health department personnel is composed of a director, one public health nurse, a sanitation supervisor, and a clerk.

GENERAL

Lauderdale County Health Department has been used as a training center for public health nurses, as well as county health officers who are later assigned to positions in full-time county health departments. The course of instruction extends over a period of ten weeks. On September 15, five public health nurses completed their course of instruction and were assigned to positions in health departments. On July 1, provisions were made for the Sunflower County Health Department to serve as a supplementary training center for public health nurses who, on account of their numbers, could not be included in the training classes in the Lauderdale County Health Department. Three nurses completed their ten weeks of public health instruction on September 15.

During the September meeting of the boards of supervisors in Quitman, Newton, and Calhoun counties, provision was made for the establishment of a full-time health department in each of these counties as soon as possible after October 1st. Still other counties in the state are contemplating the establishment of full-time health services at an early date. Many of these counties will act upon the matter during the October meeting of their boards. With the organization of the counties which have at present provided funds for the establishment of the services, there will be 64 counties having full-time health services in the state.

County Societies

ADAMS MEDICAL SOCIETY

Lt. George Logan M.C. stationed at Ft. McClellan was on a visit to his family for a few days last month. All of his friends and medical brethren were glad to see him and welcome him.

Dr. J. W. D. Dicks who has been confined to his home with illness, is much improved and out again at the office looking after his practice. We are glad to have him well again.

Dr. Julius Chishum of John Hopkins who has been visiting here with his family, was entertained by The Adams County Medical Society, at a special meeting and supper.

At the September meeting Dr. Homer Whittington gave a very informative talk on appendicitis in adults and children, which was followed by an excellent discussion. The attendance was fine, and his paper was very much enjoyed.

The Adams County Health Unit under the able management of Dr. Adams, is giving a health talk every Saturday morning over WMIS, our Natchez Radio Station. Different physicians and nurses take their turn in making these addresses which are very good and helpful to the public.

L. S. Gaudet, Editor

ALCORN COUNTY MEDICAL SOCIETY

The Alcorn County Medical Society met at the Waldron Hotel, September 19 with dinner served at 6:30 P.M.

Before dinner Mr. Bob McPeters demonstrated the new resuscitator, which has recently been purchased through civic organizations and McPeters Funeral Home, of Corinth.

The following papers were presented on the program:

Foreign Bodies in the Eye—Dr. W. A. Johns.
Secondary Meningitis—Dr. D. W. Hamrick.
Sulfonamide in Surgery—Dr. A. D. Hurt.

DeSOTO COUNTY

This journal properly eschews politics but the following observations are interesting. The Service Extension Bill passed the House of Representatives by the exceedingly narrow margin of a single vote. This measure was advocated by the President and his advisers to maintain the army at its proper standard.

The states located in what is sometimes called the "Deep South"—Alabama, Georgia, Louisiana, Mississippi, North Carolina, Texas, and Virginia—voted solidly for this deserving measure. Arkansas, Florida, Kentucky, Oklahoma and South Carolina, each cast only one vote against the bill, and two of Tennessee's representatives voted nay. This exhibits the South's spirit and her citizens can remember with pride this splendid manifestation of the desire that liberty shall not perish from the earth.

The people of the South are predominantly of Anglo-Saxon lineage. We remember affectionately Alfred the Great, who was with our ancestors in 1066 and in 1214 forced King John to sign the Magna Charta at Runnymeade on the Thames. We have the same language, traditions and the same love to be free people.

We had a fight or two with these cousins of ours but we had a real war with each other in the early sixties. Our northern brothers by a superiority in numbers of men, materials and funds finally overpowered us, but we are one nation now.

Wherever these Anglo-Saxons go, law, order, industry, education, safety for life and property, freedom of religion, speech and the press and all that makes life worth living inevitably follows.

We are not of a provincial spirit; there are many splendid folk in this section whose forebears have come from the four quarters of the globe. The melting-pot has in many cases wrought well. We honor them, for they are true and loyal to their adopted country.

An excerpt from a speech delivered in the Senate by the Hon. James O. Eastland, junior U. S. Senator from Mississippi. says:

"We of the South are the purest strain of Anglo-Saxon blood. It was the Southern brains which founded this Government, and which gave to the world democracy. We of the South do not ask or desire special favors. We demand only that we be treated fairly; that this discrimination cease; that we be not impoverished to enrich other sections of the country; (Mr. Eastland refers here to the iniquitous protective tariff and the freight rate inequality); that we sit as partners and on an equal basis at the counsel tables of the Nation; and that as partners and economic equals we take America forward to her great destiny as the leader in a world civilization of justice and economic equality."

Dr. Wm. W. Leake, Chief Surgeon of the Illinois System, calls the attention of his medical staff over the system to an article of May 17, 1941, issue of the Journal of American Medical Association on "Impaired Judgment from Sulfanilamide," which reads in part as follows:

"Many therapeutically effective drugs influence the physiologic mechanisms, psychomotor reactions or judgment of persons who take them. When given to patients at rest in bed such drugs have been established as beneficial to the patient and of course harmless to other persons. Under some circumstances, however, drugs may have effects potentially dangerous to both patient and community. Not long ago a locomotive engineer who was taking sulfanilamide for an infection of the bladder was involved in an accident in which considerable property damage was done and a number of people were injured. He described the event as follows:

'"Approaching the station where the accident occurred, a feeling of lassitude seems to have crept over me unawares and to the extent that I do not have much recollection of what went on for the last two or three miles. I was sitting on my seat, looking out and feeling that I was on the alert . . .Actually I was not on the job with all my faculties. I passed landmarks customarily used to locate position without seeing them, even to the station board; and it was only when the hazard became imminent that I was aroused out of it and became efficient.'

"Already physicians have ruled that airplane pilots must not fly until four days have elapsed after they have received any of the sulfonamide group. Patients engaged in mechanical work of any kind should not take sulfanilamide except when relieved from their responsibilities. Physicians thus have a definite obligation when prescribing sulfanilamide. Patients should be cautioned preferable to stay at home and at rest while taking the drug and not to drive an automobile, make any important decision or sign any papers while the drug is being administered. Such recommendations seem especially advisable in view of the insidiously developing reactions of sulfanilamide when compared with such drugs as the bromides and the barbiturates."

The chigger, sometime written as chigoe, chigere and jigger, is equally persistent and on the job under any of these names. He, or rather she, is a tiny bit of animated flesh that has a way of making herself known in a definite and powerful way. During the maneuvers of the armies down southward, this creature is making herself felt in a manifest manner.

After contacting this flea-like varmint, our soldier boys will look forward to a shooting-war with less concern and alarm.

As with the mosquito and in fact all along the line, the female of the species is more dangerous than the mere male. It seems that mercurochrome or some other of the dies, 2% lotion of rotenone are recommended for this pestiferous trouble.

The tomato belongs to a natural order of plants usually regarded with suspicion on account of the powerful poisonous properties of many of the species comprised in it; it is now recognized as one of the most important and valuable of vegetables grown for human food. In the days of our grandparents it was known as the "love apple." After a time the tomato was generally discredited as a love charm. However, if there is a will to believe in the amorous effects of the juiciest vegetable, some facts could be deduced for an argument. Prof. C. C. Furnas, the Yale chemist, and his wife in their book entitled "Man, Bread, and Destiny," relate that the birth rate until 1933 was very low on St. Croix, one of the Virgin Islands. In that year tomatoes were introduced for commercial cultivation. As they were cheap the natives ate freely of them. And within a short time the birth rate rose and has ever since remained high.

However, the Furnaces point out that this was not due to any aphrodisiac qualities in the tomato but to the improved health of natives when, to a deficient diet consisting principally of corn meal and fish, necessary vitamins were added.

The United States Department of Agriculture reports the consumption of tomatoes in the United States has increased by more than 100 per cent since 1922. And yet the birth rate has gone down steadily and is now at the lowest point in our history.

Tomatoes constitute a most desirable item in any family's diet, but they are not entitled to be known as love apples.

Couldn't See Any Difference

A young "United Brethren" preacher had heard his superintendent say he could preach much better when he omitted eating supper. One evening he was visiting an old parishioner and asked to be excused from the evening meal, stating he could preach much better if he did so. After the service that night the old man whispered in his ear, "Young man, you may as well 'a' et."

EAST MISSISSIPPI MEDICAL SOCIETY

The East Mississippi Medical Society met in regular quarterly meeting at the Lamar Hotel, September 18. Dr. T. G. Cleveland, president, presided throughout the meeting.

The following committee was appointed to prepare the scientific program for the December meeting, which will be December 11: N. C. Knight, H. L. Arnold, A. C. Byran. A motion was made and seconded and carried unanimously that resolutions of sympathy of Dr. A. G. Touchstone be prepared and sent to his family. Dr. R. L. Wyatt, of Shubuta, was admitted to membership.

The scientific program was carried out as follows:

"Cervicitis — Diagnosis and Treatment" — Omar Simmons, Newton.

"Application of the More Recent Vitamins in the Complications of Pregnancy" — Gus Rush, Jr., Meridian.

"The Diagnosis and Control of Typhus Fever"—George E. Riley, Jackson.

Woman's Auxiliary
TO THE
MISSISSIPPI STATE MEDICAL ASS'N.

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President-Elect	Mrs. V. B. Philpot	Houston
First Vice-President	Mrs. E. C. Parker	Gulfport
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Advisory Council: Dr. H. Lowry Rush, Meridian; Dr. A. Street, Vicksburg; Dr. E. C. Parker, Gulfport; Dr. Billy S. Guyton, Oxford, Dr. Jake Ullman, Natchez.

EXECUTIVE BOARD MEETING

On Sept. 24, 1941, the Executive Board of the Woman's Auxiliary to the Mississippi State Medical Association met with Mrs. W. K. Stowers in her home at Natchez for a luncheon and business meeting. Eleven members, one visitor, two past-presidents of State Medical Association, Drs. Ullman and Dicks, and Dr. Street, president at this time, were in attendance.

Each of these doctors spoke briefly commending the Auxiliary for its past activities and urging that we keep wide awake as to present-day conditions and that we work for a closer coöperation in organized medicine and helpful legislation. Dr. Street urged that those counties that are without auxiliaries be contacted and, where possible, new units be formed.

At the suggestion of Mrs. Lippincott, chairman of Public Relations, a motion was made and carried that she invite the A. M.A. Public Relations chairman for a series of lectures in the state and to be present at the state meeting in May, 1942.

Mrs. E. C. Parker stated that the yearbooks would soon be ready for distribution and a motion made by Mrs. Lippincott carried, accepting ten dollars promised by Dr. Street in order that these books may be mailed this year to individuals rather than auxiliary presidents. Hereafter this method will be pursued.

Mrs. Philpot pledged her efforts in her capacity as Organization Chairman and Mrs. Street reported that three children have been sent to the Preventorium through Auxiliary recommendations. Mrs. W. W. Crawford reported $43.00 in hand for the Jane Todd Crawford Memorial Fund. She is holding this amount until October 15 so that auxiliaries who have not yet contributed may have the opportunity.

Mrs. Stowers has been invited by Miss Susie V. Powell, secretary of the Coördinating Committee of Home Defense, to become a member of that board, but because of a clause in our constitution forbidding affiliation with other clubs, action was deferred and the matter referred to the Advisory Board.

The president asked that she be informed about deceased members or members of their families.

Announcement was made of the state meeting in Jackson on May 12-13-14, 1942.

A delicious luncheon was served from a long table very fittingly decorated in typical Southern fashion and truly "Old Natchez." Tiny bales, miniature baskets and carts, and bolls of cotton were placed along the table and negro "mammy" dolls marked each place.

Pretty seasonable flowers were used as further decoration throughout the spacious reception rooms. Following the luncheon a business meeting was held in the sunporch.

Those present: Mesdames E. C. Parker, Gulfport; V. B. Philpot, Houston; A. Street, Vicksburg; H. C. Sheffield, Jackson; Leon Lippincott, Vicksburg; H. C. Hicks, Jackson; W. W. Crawford, Hattiesburg; R. F. Ratliffe, Lucedale; J. S. Ullman, Natchez; R. C. Ely, Moss Point; and Drs. A. Street, President of the Mississippi State Medical Association; Vicksburg; J. S. Ullman, Natchez; J. W. Dicks, Natchez. Miss Grace Philpot, Houston, was a guest.

BILOXI UNIT MEDICAL AUXILIARY

Mrs. D. L. Hollis was elected president of the Biloxi Unit of the Coast Counties Auxiliary at a meeting in the home of Mrs. J. A. Graves on West Howard Avenue last month.

Her corps of officers includes Mrs. J. J. Carter, vice-president, Mrs. Ben Martinez, secretary, and Mrs. J. A. Graves, treasurer.

Plans for the season's activities were suggested. Refreshments were served by the hostess.

COAST COUNTIES AUXILIARY

Mrs. H. K. Rouse, new president of the Coast Counties Medical Auxiliary, was hostess for the first meeting of the new club year. Red Cross hospital surgical gowns to be cut and made by the members were distributed. Mrs. C. H. McCall was appointed chairman of this project. The following committee chairmen were appointed: Mrs. E. C. Parker, program; Mrs. G. M. Melvin, ways and means; Mrs. H. E. Hoke, Hygeia and publicity; Mrs. M. M. Snelling, hospitality; Mrs. C. H. McCall, defense; Mrs. Wallace Sheely, preventorium. The October meeting, Wednesday .October 15, will be a luncheon at Hotel Markham, with Mrs. J. P. Evans and Mrs. H. E. Hoke as hostesses. The program will deal with "Health."

THE ROCK OF AGES

By Grace Noll Crowell

Though all the churches of the earth be blown
To bits by high explosives from the skies,
Up from their foundations, stone by stone,
Their walls will lift again, their spires will rise,
Their windows stained with jewel fire will shed
Clear light upon the upturned faces there;
Hands will dispense again the wine, the bread,
And at new chancels men will kneel in prayer.

For deeper than the earth the Lord has laid
The granite rock on which his churches stand,
And he alone with unseen pick and spade
Has delved and grappled with a mighty hand,
And nothing can destroy his work, his Word,
Nor the Rock of Ages, Jesus Christ our Lord.

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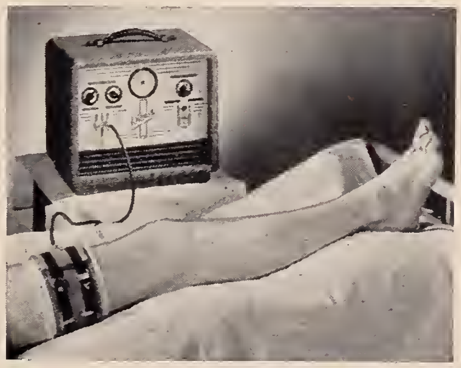

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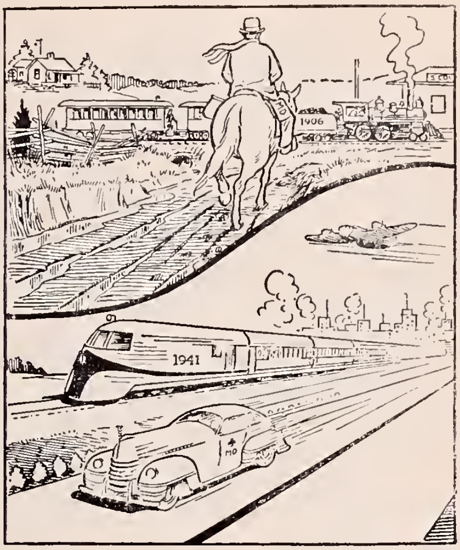

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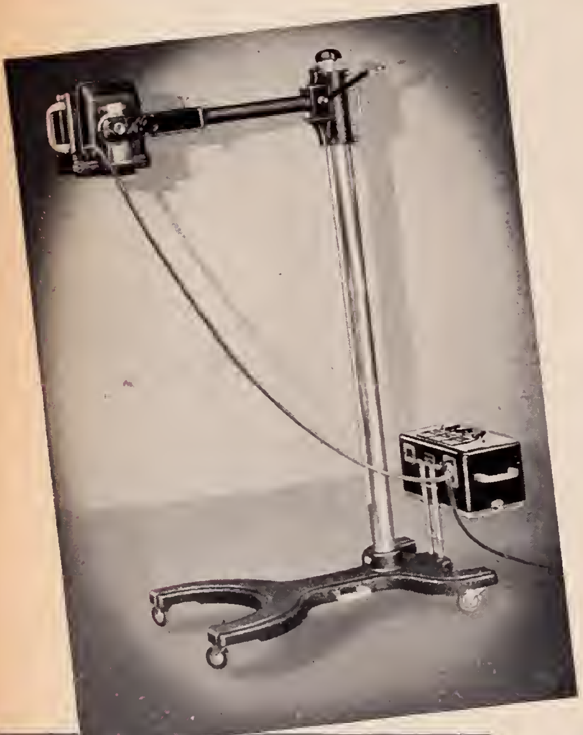

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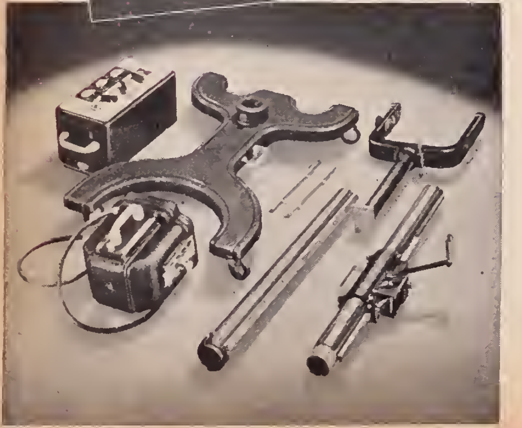

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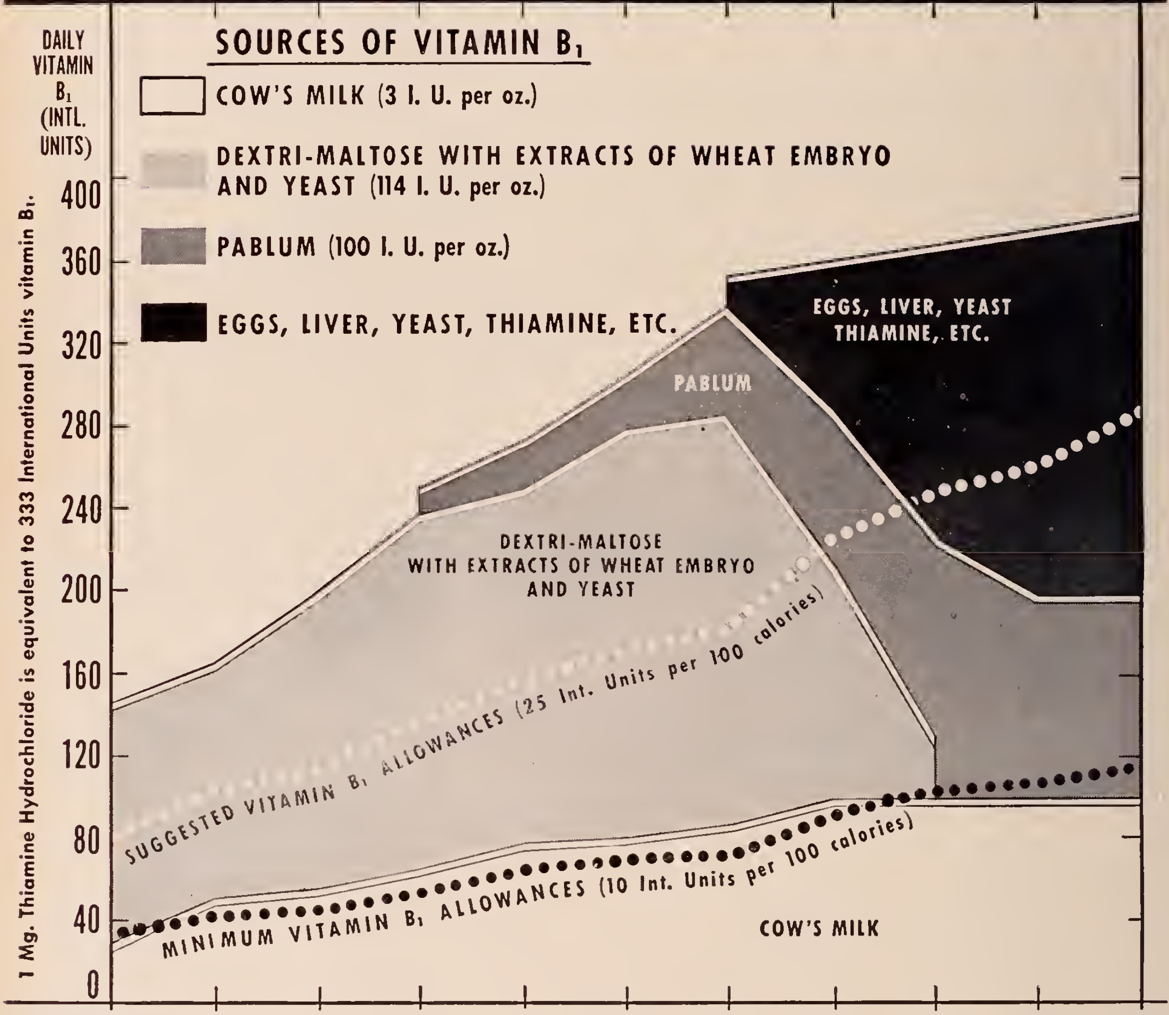

AGE, Mos.	1/4	1	2	3	4	5	6	9	12	18	24
WEIGHT, Lbs.	7	9	10	12	14	15	16	20	22	23	25
MILK, Oz.	10	16	18	21	25	26	28	32	32	32	32
DEXTRI-MALTOSE WITH EXTRACTS OF WHEAT EMBRYO AND YEAST, Oz.	1	1	1¼	1½	1½	1¾	1¾	1	¼	0	0
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[1] Jeffcoate, T. N. A.: *Brit. Med. J.* 2:671 (Sept. 30) 1939.

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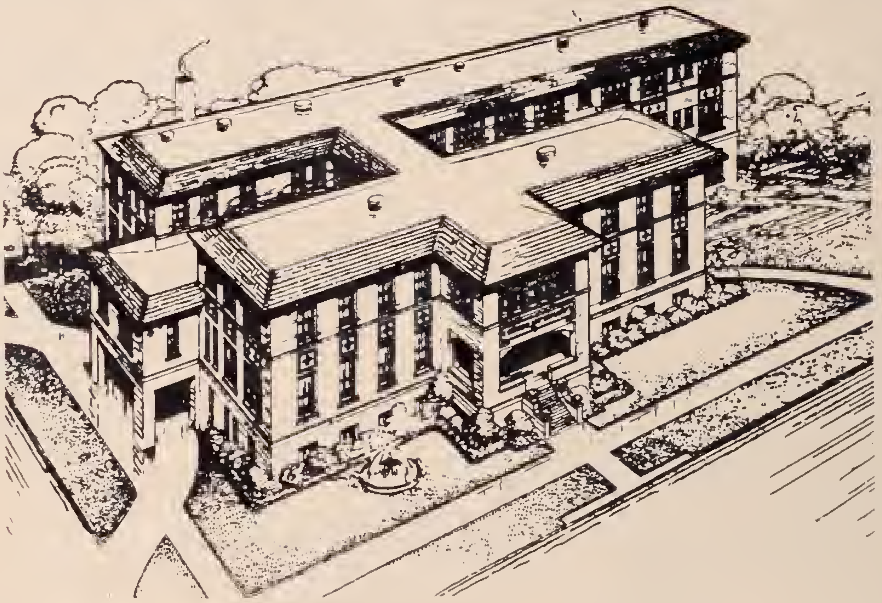

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Vitamin A and B Deficiencies and Methods for their Detection*

F. W. SCHLUTZ, M.D., M.S.
From the Department of Pediatrics, University of Chicago
CHICAGO, ILL.

THE SUBJECT of vitamins is a relatively recent addition to the field of medicine. Major investigation in the field goes back less than thirty years.

No subject in any field of medicine in the last decade has approached in volume the amount of investigation done on these dynamic substances.

In the earlier period of these investigations a prevalent idea developed that human beings can suffer from vitamin deficiencies only when they exhibit such symptoms as were observed in the experimental animal, or the severe symptoms encountered in the individual suffering from extensive nutritional deficiency.

There has been considerable modification of this idea within the past few years. It is becoming increasingly clear that vitamins are concerned in many phases of metabolism and that there may be minor disturbances in the metabolic process during borderline deficiencies which may be causal in a disease process without giving much external manifestation.

It is almost certain that not all the vitamins essential to growth and nutrition have been discovered. Vitamins can be roughly divided into three main groups: the fat-soluble group, the water-soluble group related to citrus fruits, and the water-soluble group related to yeast and liver. A fourth group could be added to include vitamins that appear to be rather insoluble as they occur in natural food materials, and appear also to be closely related to the B complex.

The discussion in this paper is limited to vitamin A and the vitamin B complex. I have selected these two because, at the present time, interest and investigation in their activity and effects more or less holds the center of the stage. Vitamin A has been known for over twenty-five years. The greatest progress in its investigation was made when the relation between carotene and vitamin A was recognized. The structure for vitamin A proposed by Karrer in 1931 is now generally accepted. The isolation of crystalline vitamin A and its synthesis was reported in 1937. Neither synthetic vitamin A nor carotene is available commercially. It is necessary to rely upon natural sources of these compounds. In general, vitamin A is found in animal materials and the carotenoids in plant materials. In milk about one-half of the activity is found as vitamin A and one-half as carotene.

Quite recently the existence of a vitamin A_2 has been demonstrated. Vitamin A_1 predominates in the tissues of salt water fishes and vitamin A_2 in the tissues of fresh water fishes. The two vitamins A_1 and A_2 seem to have about the same biological activity. Livers of mammals do not contain vitamin A_2 but it can be absorbed and stored in the liver if fed. One international unit of vitamin A = 0.6 micrograms, and one of carotene = 0.3 micrograms of vitamin A. Vitamin A is an essential part of the biochemical machinery of all vertebrates. As far as is known, no vertebrate can synthesize carotenoids de novo. Probably all higher animals can convert certain carotenoids into vitamin A. The pathologic consequences of vitamin A deficiency are similar in man, monkeys, cattle, swine, dogs, rabbits, guinea pigs, rats, mice and fowl. For these and other reasons, facts about vitamin A learned from animal experiments are doubtless applicable to man.

Quantitatively the requirement of the animal organism for vitamin A is very small. Even the largest mammal requires only a few mg. daily.

Carotene, the important precursor of vitamin A, is closely associated in the plant with chlorophyll and sunlight. The quantity of chlorophyll in green plants is therefore a pretty good index of their carotene content. Drying or curing of greens can almost completely inactivate their carotene content, and domestic animals fed on such fodder will show low carotene or vitamin A content in their products, for example, milk and eggs, one of the great sources of vitamin A in the human diet.

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*Address presented before the fifty-sixth annual session of the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 13, 1941.

In human nutrition another considerable part of vitamin A value or activity is represented by carotene in green and yellow vegetables. Except as a precursor of vitamin A, carotene as such is not known to be active in the animal organism. Most animals have a remarkable capacity for storage of vitamin A. Almost 95% of the total stored is in the liver and the balance in small amounts in the lungs and the kidney. During low vitamin A intake, this store supplies physiological needs, but becomes depleted during prolonged deficiency. Normal cell function becomes affected and it is then that pathological changes develop.

In human beings the vitamin A content of the liver is much lower at birth, irrespective of the intake and diet of the mother, than in the liver of the adult. Vitamin A storage in the liver depends of course on the character of the diet but tends to increase with age. Chronic diseases and infections lead to lowering of vitamin A reserves. This is true especially of alimentary disorders, liver disease and diseases of kidney and bladder. Absorption and utilization of vitamin A are affected by various factors such as quantity of intake, mode of administration, influence of other substances, the degree of saturation of the body, and especially conditions in the alimentary tract. It can reach maximum absorption as early as three to five hours after administration. Carotene is equally rapidly absorbed.

The kidney plays no role in the disposition of vitamin A or its precursor carotene but if the organism is flooded with either, there will be "spilling" and excretion of the excess. The assimilation of carotene is subject to great variations. The presence of a certain amount of fat and normal absorption of fat seem necessary for good utilization of carotene. Liquid petrolatum can inhibit the absorption of carotene.

The presence of bile favors the absorption of carotene and bile acids seem directly or indirectly to play an important part in the transportation of carotene across the intestinal epithelium and in its proper absorption. In disorders involving prolonged faulty fat metabolism, for example, celiac disease, or pancreatic dysfunction or disorders involving diarrheal disorders, the absorption of carotene may be completely inhibited and the assimilation of vitamin A markedly reduced. Such conditions conceivably result in time in a deficiency state.

During and sometimes long after an infection, infants may show markedly diminished rates of absorption for carotene and vitamin A. The greater part of carotene is held in the liver. Much experimental evidence suggests that the liver cells are necessary for the conversion of carotene to vitamin A. Proof of this is partly seen in the observed fact that the rate of transformation of carotene to vitamin A is decidedly diminished in certain liver diseases and metabolic disorders like diabetes. Although no direct proof is as yet available, much circumstantial evidence suggests the liver as the principal site of vitamin A formation.

Studies of vitamin A and carotene content of the blood have been difficult because of the lack of satisfactory analytic methods. Available evidence shows that the vitamin A level of plasma is subject to great variation and that the concentration of vitamin A in the blood seems to be independent of the quantity stored in the liver. The earliest functional change observable in association with vitamin A deficiency is a decreased ability for dark adaptation — the so-called nutritional night blindness which responds to vitamin A therapy. The quantity of visual purple present in the retinas which have been dark adapted for varying periods demonstrate that the resynthesis of visual purple in the vitamin A deficient individual is abnormally low. Faulty twilight vision in vertebrates occurs with vitaman A deficiency because the mechanism for the formation of visual purple in the structures of the retina is defective.

Retinal tissue normally has a very high vitamin A content. There is strong evidence that visual purple is a conjugated protein in which vitamin A is a prosthetic group. The structures in the retina essential to the visual purple process consist of pigmented epithelium, which fact suggests the possibility that it, like other epithelial structures, may not function properly in the presence of vitamin A deficiency.

Carbohydrate metabolism, blood chemistry, absorption of fat, protein metabolism and calcium and phosphorus metabolism, are not altered during vitamin A deficiency. Careful investigations have also, quite contrary to popular belief, failed to show any significant deviations in immunologic mechanisms, ascribable directly and solely to vitamin A deficiency.

The specific pathologic changes of vitamin A deficiency affect primarily epithelial structures. Atrophy of the epithelium occurs with reparative proliferation of basal cells, and differentiation of the new product into a stratified keratinizing epithelium. The replacement epithelium, regardless of its previous function and structure, is identical in all locations and is comparable in all layers with epidermis.

The striking gross pathologic features of vitamin A deficiency in man and the experimental animal are due to accumulation of this keratinized epithelium in glands, ducts, and various organs. In the lungs of infants for example, such accumulations may lead to occlusion of the bronchi, formation and filling of bronchiectatic cavities with keratinized epithelium and atelectasis. In infants the commonest and earliest appearance of metaplasia is in the trachea and bronchi. This probably explains the persistent and chronic nature of pneumonic processes in the vitamin A deficient infant.

The renal pelvis involvement is next in frequency. Other structures involved are: the nares, accessory sinuses, especially maxillary antra, the salivary glands and the cornea and conjunctiva. In both human beings and experimental animals the involvement of the eye is a late occurrence. The cornea and conjunctiva then show the first change. Vitamin A deficiency markedly affects the teeth. Atrophy of the enamel forming structures and diminished and defective formation of dentin is the chief effect. It is suggested that loss of neurocontrol owing to vitamin A deficiency may be responsible for dental caries and in the older individual to pyorrhea and other diseases of the periodontal tissue. It is believed, and there is great possibility, that vitamin A deficiency during the formation period of the teeth outranks in the human organism all other vitamin deficiencies in importance.

The skin shows changes but not so marked as other structures. They consist of keratinizing metaplasia of the sweat and the sebaceous glands.

Except for the oesophagus, which can show hyper-keratinization, the gastro-intestinal tract shows few changes in vitamin A deficiency.

The kidneys, ureters and bladder can show marked involvement, second only to that in the respiratory tract. Vitamin A deficiency does not cause urinary lithiasis.

There is no significant effect on the nervous system, but severe degeneration of muscles has been observed in both man and the experimental animal in association with vitamin A deficiency. Excessive intake of vitamin A or carotene has in no instance been followed by deleterious effects. Repair in the recovery from vitamin A deficiency is usually very rapid when adequate amounts of vitamin A are added to the diet. Favorable changes can appear within a few days.

The relationship of vitamin A deficiency to infection has been the subject of much interesting discussion and speculation and has, I believe, led to many exaggerated claims.

Deficiency of vitamin A in the experimental animal makes it more susceptible to a variety of infections. They seem much more likely to occur in such animals than they do in those with deficiency of other vitamins.

The great predilection vitamin A deficiency has for pathologic changes in the respiratory tract and head sinuses may partly account for this lowered resistance to infection.

Lowered resistance to infection has been observed in man in the presence of severe vitamin A deficiency. There is great doubt that it exists in cases of moderate deficiency. Many more factors are doubtless involved than the A deficiency alone. The mechanism of lowered resistance to infection in vitamin A deficiency is not as yet understood. While the defensive response of the tissues in vitamin A deficiency have not been adequately studied, the majority of investigators agree that both the normal antibodies of the serum and the power to produce antibodies are not affected by any average degree of vitamin A deficiency and may show alteration only in the extreme and terminal stages of such a deficiency.

Careful experimental work and clinical observation indicate that severe vitamin A deficiency in man will lower resistance to infection. Administration of vitamin A during the course of the infection will not produce markedly benefiicial effects except in the most severe forms of deficiency.

Moderate vitamin A deficiency may prolong and increase the severity of an infection, especially upper respiratory, in man and adequate intake of vitamin A may hasten improvement and shorten the duration of such infections, but it is universally recognized that many other factors of equal or greater importance than vitamin A deficiency alone are in the picture. For this reason it is an exaggeration to label this vitamin the "anti-infective vitamin" and to ascribe to it curative value which it has by no means proved to possess.

The use of vitamin A has been indiscriminately advised for many and varied disease conditions such as hypo and hyperthyroidism, many chronic gastro-intestinal disorders, chronic disorders of the renal tract and various forms of anemia. Critical evaluation of claims of reported beneficial effects show that they rest on very insecure foundation and cannot be substantiated by unmistakable evidence.

Since neither synthetic vitamin A nor carotene are available commercially it is necessary to rely upon natural sources for these compounds. In concentrate form vitamin A is obtained from the liver oils of many marine fishes such as cod, halibut, shark, tuna; and carotene is extracted from yellow vegetables such as carrots or from green plants. In the vegetable kingdom the most potent sources are all thin-leaved green plants, and in foods of animal origin, the yolk of eggs and the liver of animals or fowl. Excellent sources are found in certain green vegetables such as spinach, sweet potato, green peas, apricots, red peppers and ripe tomatoes. Of animal origin, cream, cheese, eggs and milk form excellent additional sources.

Good sources but not as potent as the ones mentioned are certain fruits such as bananas, red cherries, oranges, prunes, pineapple and nuts. Vegetables such as green beans, brussel sprouts, cow peas, okra, green peppers and rhubarb; and animal foods, such as butter, cream, kidney, oysters and shellfish.

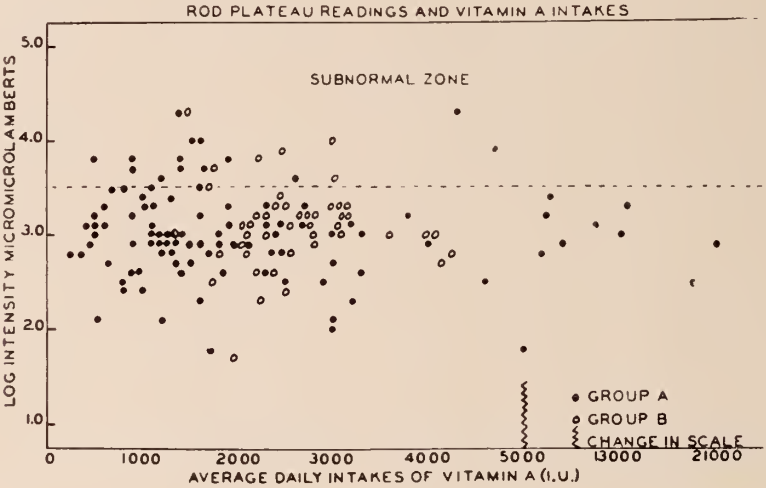
These are all foods commonly consumed, easily available and economically within the reach of nearly every one. It means that vitamin A and its precursor "carotene" are widely distributed in nature and are available in abundance. Reliable experimental proof shows that even the largest mammal requires comparatively small amounts to satisfy its minimum requirement.

In the face of these facts one can question whether vitamin A deficiency is really widely prevalent and is a serious problem in medical practice.

Gross deficiency produced either by utterly inadequate intake or by poor absorption through the influence of disease will lead to severe undernutrition and very disabling disease manifestations resulting even in death. Increasing evidence is accumulating that minor deficiencies may be contributing factors in many chronic and resistant disease processes. There is a vitamin A deficiency problem but all the available studies and surveys conducted with the best tests so far available seem to indicate that the problem is primarily individual or regional, and by no means general.

In passing it should be noted that although vitamin A is a very stabile and heat resistant vitamin, rancidity of fat does destroy a considerable part of it and high heating processes

TABLE I



in cooking can destroy a large part of carotene.

Neither minimal nor optimal requirements of vitamin A for children or adults have as yet been established. In extensive studies on adults it was found that between 20-30 I. U. per kg. or between 1400 to 2000 units daily were sufficient for the prevention of night blindness. To provide a fair margin of safety and for maintenance of a moderate storage of vitamin A in the body in excess of 3000 units daily would seem adequate for adults and is easily provided in a diet containing liberal amounts of milk, butter, eggs and green leafy vegetables. Amounts in excess of this figure would lead to optimal ranges.

Several extensive studies on children indicate that 20 I.U. per kgm. would probably meet minimal requirements. Practically no children who receive this amount show night blindness. Optimal amounts would of course range higher and have been placed as high as 6000 I.U. daily. Infants and especially the premature and the nursing mother need higher amounts than the normal child or adult.

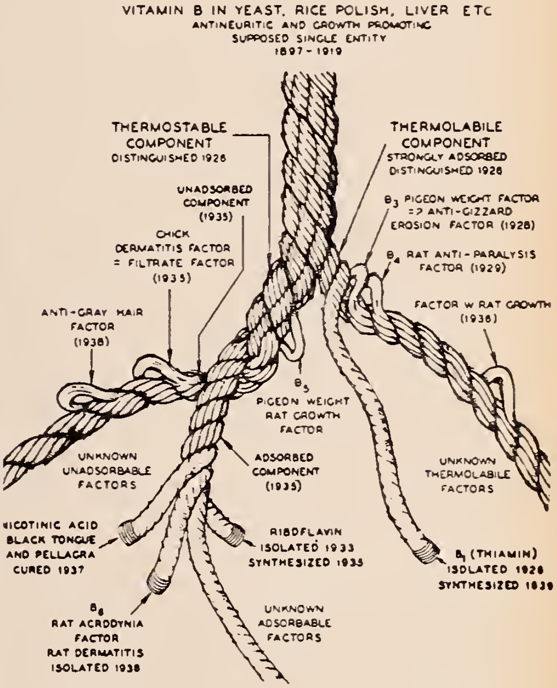
VITAMIN B

The history of vitamin B goes back to the early nineties when investigations concerning its possible nature received their first impetus from Japanese and Dutch East India workers. Accumulating scientific data and evidence, especially over the past two decades, established the fact that vitamin B was not a single substance but a complex combination with many sided activities. Dr. R. R. Williams has cleverly compared the development of our knowledge concerning this B complex to the unraveling of a rope.

Since 1926 it has been known that the vitamin B complex contained two principal fractions — one thermolabile, the other thermostabile. Each of these fractions contains many components. At the present time the chemistry of five of these components has been completely worked out and they have been synthesized. These five are: vitamin B_1, the antineuritic factor known as thiamin; vitamin B_2 or riboflavin; nicotinic acid, the antipellagra factor; vitamin B-6, the rat antidermatitis factor is now called pyridoxine; and pantothenic acid, the recently discovered chick antidermatitis factor. In addition there are several less well known factors such as thermolabile factor W which has to do with growth, an anti-gizzard erosion factor, the gray hair prevention factor, a spectacle eye factor and others not illustrated which indicate the complexity of the problems still to be solved.

It would obviously be impossible to discuss the details of the vitamin B complex in the short period of one hour. This portion of the paper will therefore be limited to the conclusions in regard to the B vitamins which are more applicable to the practitioners of medicine. These conclusions are based on a vast array of chemical and biological experimentation, and reference can only be made to the most characteristic effects of each component. To facilitate this presentation the data for the four most important factors of the B complex are summarized on a slide.

TABLE II


VITAMIN B IN YEAST, RICE POLISH, LIVER ETC
ANTINEURITIC AND GROWTH PROMOTING
SUPPOSED SINGLE ENTITY
1897 - 1919
THERMOSTABLE COMPONENT DISTINGUISHED 1926
THERMOLABILE COMPONENT STRONGLY ADSORBED DISTINGUISHED 1926
UNADSORBED COMPONENT (1935)
B_3 PIGEON WEIGHT FACTOR =? ANTI-GIZZARD EROSION FACTOR (1928)
CHICK DERMATITIS FACTOR = FILTRATE FACTOR (1935)
B_4 RAT ANTI-PARALYSIS FACTOR (1929)
FACTOR W RAT GROWTH (1936)
ANTI-GRAY HAIR FACTOR (1938)
B_5 PIGEON WEIGHT RAT GROWTH FACTOR
UNKNOWN UNADSORBABLE FACTORS
ADSORBED COMPONENT (1935)
UNKNOWN THERMOLABILE FACTORS
NICOTINIC ACID BLACK TONGUE AND PELLAGRA CURED 1937
RIBOFLAVIN ISOLATED 1933 SYNTHESIZED 1935
B_1 (THIAMIN) ISOLATED 1926 SYNTHESIZED 1936
B_6 RAT ACRODYNIA FACTOR RAT DERMATITIS ISOLATED 1938
UNKNOWN ADSORBABLE FACTORS

The antineuritic vitamin B_1, or thiamin as it is now commonly known, functions in the body after it has been phosphorylated to form cocarboxylase. It is necessary for the oxidation of carbohydrates and is therefore important to every cell in the body. It is quite universally essential to all species of animals which have been investigated, although some animals which have been investigated, such as the cow, may synthesize it to a certain extent in the digestive tract. When humans are deprived of an adequate intake of thiamin, a first symptom to be observed is a loss of appetite. This anorexia is a specific and real effect probably due to decreased gastric secretion and decreased tone of the gastro-intestinal musculature. It is the earliest symptom to develop with vitamin B_1 deficiency and is apparently manifest with even moderate degree of such deficiency. The next symptoms to be noted are muscular weakness and pain, especially in the calves of the legs.

TABLE III

	ACTIVE FORM, FUNCTION	SPECIES	DEFFICIENCY SYMPTOMS	REQUIREMENT	SOURCES
B_1 THIAMIN	COCARBOXYLASE OXIDATION CARBOHYDRATE	PIGEON, CHICK RAT, GUINEA PIG DOG, CAT PIG MONKEY HUMAN	ANOREXIA POOR GROWTH MUSCULAR WEAKNESS PARESTHESIAS NEURITIS CARDIAC INSUFFICIENCY	INFANT 0.5 MG. ADULT 1.8 MG. THERAPEUTIC DOSE 10 - 20 MG. 20 - 50 MG.	YEAST PORK OATMEAL LIVER WHOLE GRAINS PEANUTS LEGUMES
B_2 RIBOFLAVIN	YELLOW OXIDATIVE ENZYME OXIDATION - REDUCTION	RAT CHICK DOG, PIG MONKEY HUMAN	POOR GROWTH LOSS OF HAIR EYE LESIONS NEUROMALACIA CHEILOSIS	INFANT 1 MG. ADULT 3 MG. THERAPEUTIC DOSE 5 - 50 MG.	MILK GREEN LEAVES MEAT
B_2 NICOTINIC ACID	COZYMASE HYDROGEN CARRIER	DOG PIG MONKEY HUMAN	BLACK TONGUE PELLAGRA DERMATITIS DIARRHEA DEMENTIA	ADULT 15 MG THERAPEUTIC DOSE 500 MG	LIVER KIDNEY YEAST EGG YOLK SALMON
B_6 PYRIDOXINE		RAT HUMAN	POOR GROWTH " SEX DEVELOPMENT ANEMIA MICROCYTIC HYPOCHROMIC ACRODYNIA CONVULSIONS	THERAPEUTIC DOSE 10 - 100 MG	LIVER YEAST LEGUMES EGG YOLK CEREALS

In addition there are various paresthesias in the extremities such as numbness and tingling sensations. If the deficiency progresses a true peripheral neuritis develops. Neuritis due to inadequate thiamin intake may be produced in the following ways: (1) when normal diets have been limited as with alcoholics, diabetics, ulcer patients, etc.; (2) when diarrhea or other disorders prevent the proper absorption of food which has been ingested; and (3) during pregnancy, febrile illness, or other conditions such as hyperthyroidism where the requirements of the body are increased. When thiamin deficiency has progressed to more severe stages, the heart also suffers and insufficiency with enlargement and elevated venous pressure develops, possibly due to loss of tone in the sensitive auricle. The heart rate increases, the systolic impulse becomes throbbing and edema is apt to develop. Weiss and Wilkins have successfully corrected this form of cardiac insufficiency by intramuscular or intravenous doses of 20 to 50 mg. of thiamin.

Vitamin B_1 is widely distributed in nature and is found in amounts ranging from 0.1 to 2.0 micrograms per gram (approximately one part per million) in a large variety of animal and vegetable tissue.

Lean pork is one of the outstanding animal sources. Liver, heart and kidney are also good sources. Elvehjem has shown that moisture-free lean pork has a vitamin B_1 content of 1300 to 2000 I.U. per 100 gm. in contrast to 300 I.U. in beef and 400 I.U. in lamb. Even though meats are used in the diet to the extent of only 7%, they are capable of supplying one-third of the human vitamin needs. Frying meats causes the least destruction of vitamin B_1; with broiling and stewing the destruction may approach 50%.

The vitamin B_1 level in human milk is controlled by the vitamin B_1 content of the mother's diet. Contrary to common belief, vitamin B_1 is not a stimulant to increase lactation. Refined sugar is devoid of thiamin but cane molasses so widely used in the South may, if not refined, contain a high content of vitamin B_1. Failure of beriberi to appear much among the poor negroes of the Southern states may be due to their diet, which though limited, commonly contains three vitamin B_1 rich foods, low grade corn meal, molasses and pork.

The human body has little capacity for storage of the essential anti-neuritic vitamin. For this reason, and to maintain normal health, a constant daily supply is necessary from foods; or if lacking in the diet it must be supplied from other sources such as yeast, vitamin extracts, concentrates, or foodstuffs reinforced or fortified by the addition of vitamin B_1.

Vitamin B_1 is probably less adequately supplied in the average American diet than any of the known vitamins essential to health. More than one-half the foods in the average American diet have no appreciable content of vitamin B_1.

The milling of wheat to produce white patent flour; the polishing of rice (the staple food of about half the human race) and other processes which remove the bran and husks of grains and cereals; the sulfurizing of fruits; the refinement of molasses; all remove the most potent source of the anti-neuritic vitamin from the diet.

The United States consumes annually per capita flour made from about four bushels of wheat and 100 lbs. of sugar. This accounts for 55% capita the flour made from about four bushels of wheat and 100 lbs. of sugar. This accounts for 55% of a daily average intake of a 2500 calorie diet. Such a diet does not contain over 50 I.U. of vitamin B_1.

In the diet of our ancestors, 1840 for example, only about 25% of the calories per day were provided by sugar and the balance of the diet was provided by grain products milled by crude processes which, however, returned about 85% to 90% of the grain as flour—containing more than 75% of the original vitamin of the whole grain. Fifty-five per cent of such a diet would have yielded 600 I.U. of vitamin B_1 against the 50 of today.

Our ancestors also consumed more legumes and nuts than we do today. In a 2500 calorie diet of their day, they probably never had a vitamin B_1 intake of less than 900 to 1000 I.U. daily.

When factors enter that increase thiamin requirement such as increased metabolism or rapid growth, or pregnancy, or disease processes—for example, parasitic infestation, malaria, tuberculosis, hyperthyroidism, immoderate alcohol consumption, it is conceivable that all degrees of clinical vitamin B_1 deficiency states may develop.

The impression is gaining ground that many of the clinical forms of neuritis which are quite commonly encountered in practice and which travel under such labels as alcoholic, diabetic, metabolic, gastrogenic neuritis, polyneuritis, and infections, are really misnamed and are actually cryptic forms of vitamin B_1 deficiency and would yield more readily to adequate B_1 therapy. Reliable clinical reports prove that they do.

Pharmacological experiments in animals have shown that pure vitamin B_1 has an extraordinary therapeutic range. For all practical purposes it may be regarded as nontoxic. Persistent and prolonged use has no cumulative or toxic effect in man. Dosages as high as 500 mg. daily for long periods have shown no harmful effects.

The minimal requirements for vitamin B_1 intake are well established. The optimal intake is as yet not known. A comprehensive survey of the experimental data to date suggests the following figures for average daily intake: for adults from 1.8 to 2 mg. daily; during pregnancy 2.5 mg.; during lactation 3 mg. (The average American mother receives less than half this amount in her diet today). For infants the requirement is 0.5 mg. daily. For the pre-school child 1 mg; for the early school child 1.5; for the adolescent girl 2 mg., and for the adolescent boy 2.5 mg. daily.

I wish to consider next that portion of the old vitamin B_2 complex which is now known as riboflavin. This flavin, when combined with a protein and phosphoric acid, forms the "yellow oxidative enzyme" and functions in the reduction-oxidation systems within the cells. Like thiamin, it also is quite universally needed by various species of animals. A lack of riboflavin in the diet results in poor growth and loss of hair in the rat. Day has observed cataract developing in rats and other animals, and Cosgrove has related senile cataract to a possible riboflavin deficiency.

Another eye lesion which may be even more significant is a conjunctivitis associated with keratinization of the cornea. This condition, along with A deficiency, seems to be partially responsible for night blindness.

Neuropathologic manifestations of riboflavin deficiency have been observed in dogs and chicks. These consist of degeneration of axis cylinders and medullary sheaths of posterior columns of the spinal cord and also of the peripheral nerves. Dogs deprived of riboflavin show spasticity and generalized weakness as the early symptoms of a collapse apparently due to cellular asphyxiation brought about by a lack of a cellular oxidation catalyst.

Sebrell has reported that the first symptoms of human riboflavin deficiency are lesions about the lips. The cheilosis is characterized by pallor of the mucous membrane at the angles of the mouth, followed by maceration and superficial transverse fissures. Seborrheic accumulations around the nose, eyes and ears are also observed.

Since this deficiency was first recognized in 1938 many writers are reporting cases in their various clinics, particularly in the South, but also in New York and other large cities. It is often associated with other deficiency diseases. Sebrell sees at least one case a month on a service admitting an average of 272 patients.

The requirement for riboflavin is about the same in magnitude as the amount of thiamin needed, infants requiring about 1 mg. and adults about 3 mg. each day. Milk and green leaves are the best sources for riboflavin. It is present in meat, but cooking losses have not yet been adequately determined.

Nicotinic acid was the third factor of the vitamin B complex to be isolated in pure form. Like the other factors just described it also functions in the enzyme systems of the body which are essential for oxidation reduction reactions. Its active form in the tissue cells is cozymase.

In 1937 Elvehjem discovered that nicotinic acid could cure canine black-tongue. Since Goldberger had previously established the similarity of this disease in dogs to human pellagra, immediately upon Elvehjem's discovery, nicotinic acid was tried on the human disease. You are all probably well acquainted with the clinical results. They have been excellent. Nicotinic acid seems to have a beneficial effect upon each of the three manifestations of pellagra; and conditions of the skin, alimentary tract and nervous system are all improved.

In severe cases therapeutic doses of nicotinic acid as high as 500 mg. are used, but the requirement to maintain health and prevent the development of pellagra is about 15 mg. per day. The use of nicotinic acid, however, for the treatment of pellagra has shown the clinician that this disease is frequently the result of a multiple deficiency.

Additional thiamin is often necessary to cure the nerve symptoms; riboflavin must be used for certain skin lesions and pyridoxine also may be essential before complete physical well being can be restored. The diet, therefore, should contain not only those foods with a high nicotinic acid content, but also foods to furnish the other important vitamins.

Sebrell has compiled lists of foods which are primarily valuable in the treatment of pellagra and stresses the use of milk, eggs, fresh meats and vegetables.

The next factor of the vitamin B complex is to be isolated was pyridoxine. Before its chemical nature was known this factor was called vitamin B-6. The details of its application to human needs have not yet been entirely worked out, but there are several suggestions from the work with animals which seem important. Fouts, studying pyridoxine deficiency in puppies, observed a microcytic, hypochromic type of anemia which responded readily to pyridoxine therapy.

Last summer Dr. Kato, of our staff, discovered this form of anemia in an eight-year-old girl who had previously had celiac disease. The anemia in this patient did not yield to iron therapy, but the blood picture slowly returned to normal when pyridoxine was included in the diet.

The specific lesion for deficiency of this vitamin in rats is a florid type of dermatitis which resembles somewhat the symptoms of acrodynia as observed in young children. In human beings, dermatitis lesions around the mouth have been improved by the use of pyridoxine. In any attempt to treat acrodynia, this element of the B complex should surely be tried.

With certain pellagrins, already treated with thiamin, riboflavin and nicotinic acid, Spies has found residual effects such as nervousness, insomnia, irritability, abdominal pain, weakness and difficulty in walking. These symptoms were corrected only when pyridoxine was given.

Of even more interest may be the development of specific convulsive states during pyridoxine deficiency. Epileptiform fits have been observed in pigs, dogs, rats and chicks. In humans some decrease in rigidity has resulted when cases of Parkinsonism have been treated with this vitamin, and Spies has noted benefit from pyridoxine therapy for idiopathic convulsive states. Spies states that much more study of these conditions is necessary before conclusions will be reliable. The vitamin can be injected intravenously when properly buffered, but the buffer solution and the pyri-

TABLE IV

FOOD CONSUMPTION OF CHILDREN
AS INFLUENCED BY VITAMIN B_1

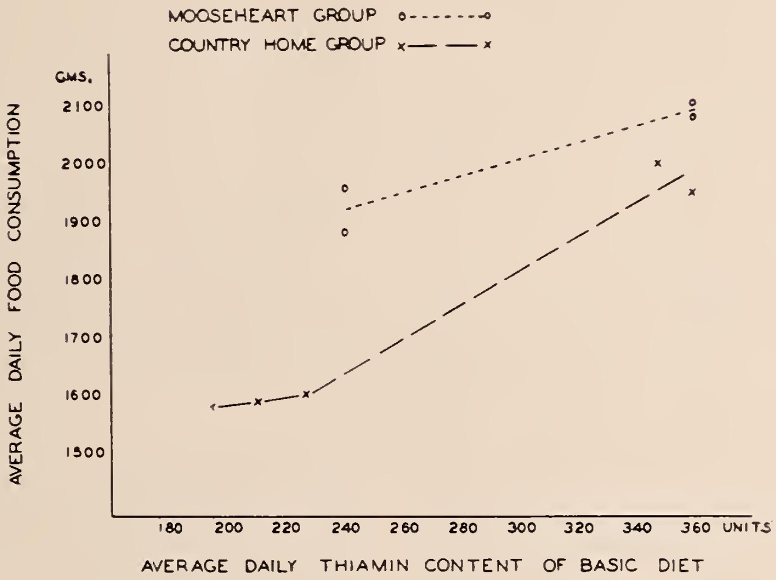
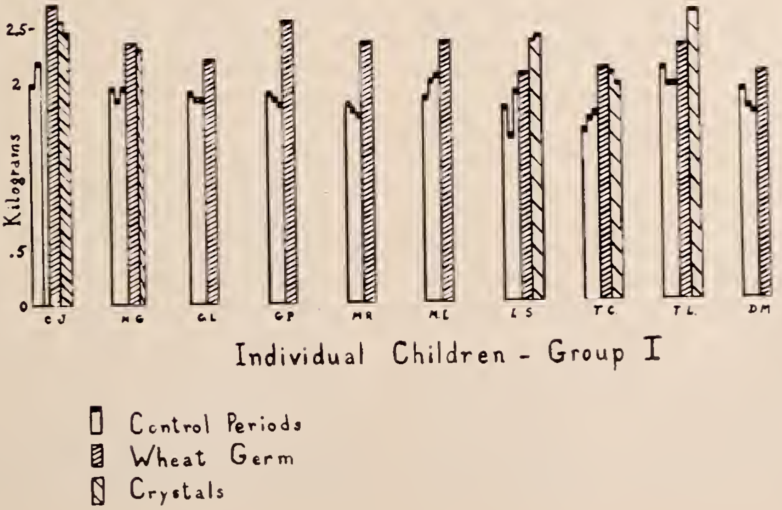


TABLE V

Relation of Daily Food Consumption
per square meter Body Area
to Source of Vitamin B



doxine must be sterilized separately. Careful following of directions developed by Merck and Company is essential. Since therapeutic doses in the range from 10 to 100 mg. are effective, the daily requirement will probably be comparable in magnitude to the amounts needed with thiamin or riboflavin.

In my department, at the University of Chicago, our interest has centered chiefly around thiamin, and for several years we have been conducting experiments to determine the function and requirement of this essential vitamin in infants and young children.

Chart IV shows the results of an early study where vitamin B_1 supplements were given to two groups of children. These children were already receiving quite well balanced diets, but when 120 to 150 additional units of thiamin were given, the average number of grams of food consumed daily by the children increased from 15 to 25 per cent.

Chart V shows these results among the individual children. Since children of varying ages and sizes were included in the study for the sake of comparison, the data for this chart have been computed on the basis of kilograms of food eaten per square meter of body surface area.

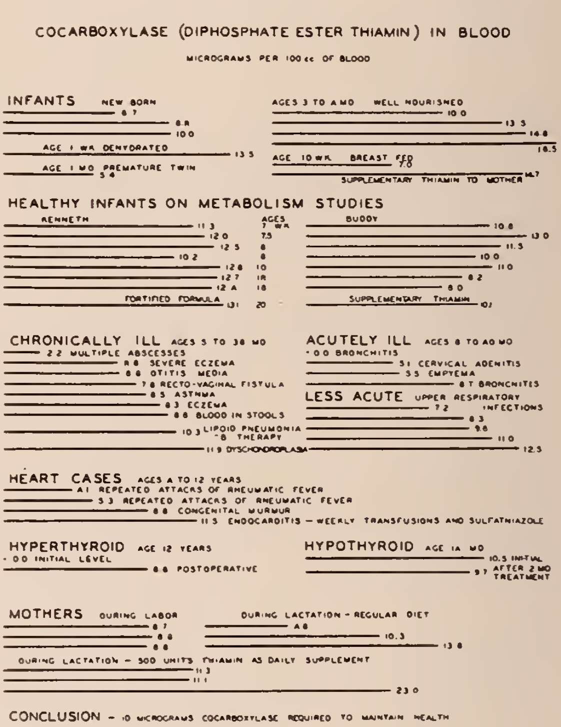
This study emphasizes that vitamin B_1 can have a very real effect upon appetite. With normal children the effect is more that of stabilization than a prolonged increase in food consumption. With under par children, both the magnitude and the duration of the increase are greater. Growth, like appetite, is stabilized by the use of high thiamin diets.

Chart VI illustrates a study which we started this past year. By the use of a special enzyme technic we were able to measure the amount of cocarboxylase present in the blood cells. Free thiamin circulates in the blood plasma, but the active form, where thiamin has been linked with phosphorus, is found within the cells. The ratio of active cocarboxylase to free thiamin in blood is about ten to one. By measuring the blood cocarboxylase we were therefore able to obtain an accurate indication of the functioning thiamin supply for the body. This chart shows representative results for different groups of children.

So far as we have been able to tell 10 micrograms of cocarboxylase per 100 cc. of blood are adequate to maintain health. The majority of our newborn and healthy infants had values for cocarboxylase of 10 micrograms or higher. In contrast to these, both the chronically ill and the acutely ill children frequently had cocarboxylase values of less than 10 micrograms.

We believe that two factors have been responsible for these low values. Undoubtedly food intakes of thiamin have been curtailed during the period of ill health, but in addition when fever has been present, the increase in metabolism has increased carbohydrate oxidation and thereby increased the need for thiamin. This increased need for thiamin was also well illustrated in our hyperthyroid case. This young girl had a blood cocarboxylase of zero in spite of a high vitamin diet. Even intermittent doses of thiamin could not maintain her blood vitamin level. Postoperatively, when her metabolic rate had been decreased from its previous + 35% to a − 11%, her blood cocarboxylase returned to normal.

TABLE VI



On the basis of these data for chronically and acutely ill children, it is interesting to speculate how much tiredness, weakness, muscle pain and paresthesias during these illnesses may be due to thiamin deficiency.

A particularly interesting group of children which we wish to study much more in detail, are our cases of chronic rheumatic fever. With these children we often obtained cocarboxylase values as low as in some of our acutely ill children. We cannot at the present time postulate an etiologic relationship, but at least the condition warrants further investigation. The blood of the only breast-fed infant we studied contained seven micrograms of cocarboxylase per 100 cc. When thiamin was given to the mother the infant's blood cocarboxylase rose to 14.78. This illustrates that breast milk may often be low in thiamin content, and that lactating women require more thiamin than can be obtained from the average diet.

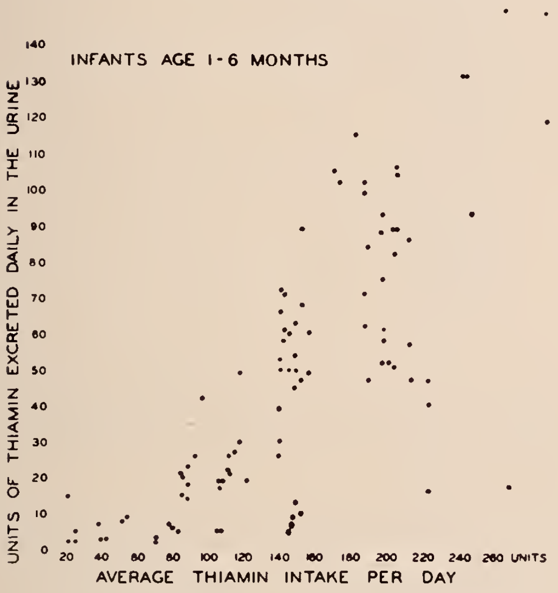
Another study which may interest you is an investigation of the urinary thiamin excretion of young infants.

TABLE VII

URINARY EXCRETION OF THIAMIN BY YOUNG INFANTS

BELOW 80 UNITS OF INTAKE URINARY THIAMIN IS LOW

ABOVE 140 UNITS EXCESS THIAMIN IS RAPIDLY EXCRETED



OPTIMUM REQUIREMENT IS 100-150 UNITS PER DAY

Chart VII summarizes our results for the past four years. Each dot represents the average daily amount of thiamin in the urine of an infant during one five-day metabolism period. Twelve infants were included in the study, and a total of 98 five-day periods are represented on the chart. Each infant was therefore studied for at least eight metabolism periods, and was usually given two or more different levels of thiamin intake. You will notice that when thiamin intakes were 80 or less units per day, the infants uniformly excreted a low amount of thiamin in the urine.

It was only when intakes were above 140 units of thiamin per day that the vitamin appeared in the urine in increasingly larger amounts. These data seem to indicate that less than 80 units of thiamin is an inadequate intake, and that excess thiamin appears in the urine only when intakes are above 140 units. We therefore make the tentative conclusion that 80 units represents a minimum thiamin requirement while 140 units may be the maximum amount needed for the infant less than six months of age.

The optimum for the baby, however, cannot be determined by economy of vitamin alone, and infants may require a considerable continuous wastage. Further investigations are now under way to determine the lowest thiamin intake which is compatible with health, and also the optimal amounts of vitamin B_1 for the best development of the infant.

The work on the relation of vitamins to metabolism has not only aided us in understanding the functions of vitamins but in many cases it is helping to clear some of the mysteries of these all important body functions.

Two very important results are emerging from vitamin studies. We are learning that more and more diseases are associated with nutritional disorders and are learning that the diet we are daily consuming can have the most glaring deficiencies and even under good conditions can be far from ideal or optimal to insure our best health and growth.

On account of its intimate and apparently indispensable connection with all forms of cell metabolism and cellular respiration the B complex is doubtless the key vitamin and recognition of deficiency of all or any of its component factors will engross our attention and promise to open up to us entirely new fields of therapeutic accomplishment.

Our techniques for assaying vitamin A and B_1 status and methods for determining clinical and subclinical degrees of deficiency still leave much to be desired and have by no means reached any stage of practical usefulness or possibilities within the range of daily practice.

Five methods have been proposed for our

use for the estimation of vitamin A deficiency: (1) dark adaptation, (2) determination of vitamin A level of plasma or serum, (3) differential blood counts, (4) cutaneous lesions, (5) degree of cornification of conjunctival epithelium.

Dark adaptation tests are not practical tests for the practitioner. They are the best tests for research purposes which we now have. The procedures employed are highly technical and very difficult, and can only be carried out by an exceptionally well-trained personnel. The equipment is prohibitively expensive.

The test for the A level in plasma or serum has some value. Studies done at the University of Chicago led to the conclusion that if, in a fasting condition, the A level is high, it means that the subject has had an adequate diet; if low there is a deficiency. This test is also technically very difficult and in its present form, not applicable clinically.

The other tests for vitamin A have very limited value and the interpretation of the findings is very uncertain.

The situation with reference to methods for determining vitamin B complex status or deficiency is much the same as that for vitamin A. There are at present no simple, practical, usable methods.

Chart VIII summarizes the various assay technics which have been used for quantitative studies of the important members of the vitamin B complex. Before the chemistry of these vitamins was known, only biological procedures could be used. Although animal studies are time consuming and have the disadvantage of requiring relatively large quantities of the material to be assayed, they are reliable if the assay technic has been carefully standardized.

In recent years chemical procedures have been perfected and are now being tried on clinical material. Most of the chemical assays are based on the development of a color compound which is specific for the vitamin and the measurement of the color intensity by means of a photo-electric cell. Such procedures are quite accurate for simple vitamin solutions, but are difficult for routine use with biological materials where the vitamin must be first quantitatively extracted and put in solution free from interfering substances. Carefully trained workers and elaborate and expensive apparatus are necessary if results of assays on blood, urine, tissues and foods are to be reliable.

At present these procedures are in use in a few clinics which have research staff facilities and both interesting and practical results are being obtained. We hope that in the near future the assay technics will be more available to the general practitioner, for they are necessary for detecting subclinical deficiencies.

The tremendous increase in the promotion of commercial vitamin preparations is one of the interesting outgrowths of the extensive investigations and research in this field. To the high-grade pharmaceutical concern which furnishes reliable and scientifically assayed

TABLE VIII

	ASSAY TYPE	TECHNIQUE	INSTRUMENT	AUTHORITY	APPLICATION
THIAMIN	BIOLOGICAL	RAT GROWTH	RAT WEIGHT	KNOTT	BLOOD COCARBOXYLASE 01 MG./100 CC.
		BRADYCARDIA	ELECTROCADIOGRAM	HARRIS	
	ENZYME	DECARBOXYLATION PYRUVIC ACID	WARBURG MANOMETER	PETERS, OCHOA GOODHEART	
	CHEMICAL	P-AMINOACETOPHENONE	PHOTOELECTROMETER	PREBLUDA, McCOLLUM MELNICK, FIELD	URINE .06-.30 MG./DAY
		THIOCHROME	FLUOROPHOTOMETER	HENNESSY, CERECEDO	
RIBOFLAVIN	BIOLOGICAL	RAT GROWTH	RAT WEIGHT	SHERMAN, BOURQUIN	URINE 0.8-1.2 MG/DAY
		LACTOBACILLUS CASEI GROWTH	TITRATION ACIDITY	SNELL, STRONG	
	CHEMICAL	IRRADIATION	FLUOROPHOTOMETER	SUPPLEE, BENDER HODSON, NORRIS	
NICOTINIC ACID	BIOLOGICAL	CANINE BLACKTONGUE	DOG	ELVEHJEM	BLOOD .5-.8 MG/100 CC
		DYSENTERY B. GROWTH	TITRATION ACIDITY	DORFMAN	
	ENZYME	COZYMASE	WARBURG MANOMETER	EULER; ELVEHJEM	
	CHEMICAL	DINITROCHLOROBENZENE	PHOTOMETER	SPIES, KERRER, KELLER	
		CYANOGEN BROMIDE + ANILINE	"	KRINGSTAD, NAESS MELNICK, FIELD	URINE 2-30 MG/DAY
		+ METOL	"	BANDIER	
		+ P-AMINOACETOPHENONE	"	HARRIS, KODICEK	
PYRIDOXINE	BIOLOGICAL	RAT DERMATITIS		SCHNEIDER	URINE 0.5-1.5 MG./DAY
	CHEMICAL	GIBBS INDOPHENOL	COLORIMETER	KERESZTESY	
		FOLIN-DENIS PHENOL	"	KUHN, LÖW	

and tested products we owe a great deal. They have given valuable aid to research and put into our hands synthetic vitamins and concentrates with which remarkable therapeutic results can be achieved.

There are, however, some drawbacks. The preparation of these materials is very costly. In their concentration from natural sources in which they are supposedly very rich, such as yeast, or liver, many other and very essential fractions are destroyed.

It all leads us back to some very elementary considerations. Our environment during the past few decades has become limited to the grocery store and the drug store. Our natural foods are packaged and devitalized and the vital elements so necessary to our well being are sold in the drug store.

Would it not be sensible to obtain our essential vitamins from natural foods as far as possible? In that form they are cheaper, more palatable and in better balance with other factors. We would be wise to turn from excessive refinement of our food and return to the more crude, but not less wholesome products of our forefathers without the destructive processing now so commonly in use. This is certainly true of wheat flour and rice, two products so widely used all over the world.

It is probably an agricultural problem as much as a commercial one. There should be more attention to crop growing and culture with a view of higher vitamin content of the product rather than dry substance.

We must have development of more and better, and more practical methods for assaying vitamin status and for ascertaining subclinical phases of deficiency.

Constructive measures like these will, I believe, prove the solution of this present day perplexing problem, and one so important to the proper growth and well-being of every living thing.

Etiological Diagnosis of Uveitis*

JACK S. GUYTON, M.D.
From the Wilmer Opthalmological Institute of the Johns Hopkins Hospital and University.
BALTIMORE, MD.

THE CRITERIA employed in determining the cause of endogenous uveitis vary widely because of individual bias of observers in different clinics and because of changing opinion coincident with steady improvement in medical knowledge. These radical differences of opinion in different clinics and in succeeding decades are reflected in published statistics on the etiology of uveitis, of which Table I gives several examples.

TABLE I: Examples of published statistics on the etiology of uveitis

Author	No. of Cases	Tuberculosis	Syphilis	Gonorrhea	Foci of pyogenic infection	Other	Undetermined or not stated	Remarks
Arlt (1863)	152	36%	17%			22%	26%	
Irons and Brown (1923)	200	4%	19%	5%	63%	5%	4%	Iritis only
Gilbert (1930)	500	46%	17%	3%	3%	15%	17%	Iritis only
Gilbert (1930)	50	70%	8%				22%	Choroiditis only

In the middle of the last century uveitis was commonly regarded as due to syphilis, rheumatism, gout and tuberculosis. In the latter part of that century localized pyogenic infections were occasionally blamed, and in the early part of the present century an increasing number of cases in this country and in England were attributed to localized focal infections. On the other hand, in Germany the tendency was to attribute a greater number of cases to tuberculosis and to minimize the importance of focal infection. With the introduction of the Wassermann reaction, it became clear that the importance of syphilis as an etiological factor had been greatly overestimated. During the past 50 years the number of cases attributed to syphilis has steadily decreased. Gonorrhea has maintained a small but definite place as a causative factor.

Dr. Alan C. Woods and I recently undertook a study which forms the basis of the present discussion. This clinical study of the causes of endogenous uveitis was based on a survey of 562 patients with iridocyclitis, choroiditis or generalized uveitis who were admitted to the wards of the Wilmer Ophthalmological Institute of the Johns Hopkins Hospital between 1925 and 1939. Since no strictly out-patients were included, these patients comprise a select group with uveitis more severe than the average; in approximately 75% of the patients the uveal disease was either recurrent or chronic.

In carrying out this study the final etiological diagnosis in each case was reached after an evaluation of (1) the history, (2) the ocular and general physical examination, (3) the results of serological tests for syphilis and of intracutaneous tuberculin sensitivity and of a search for foci of infection, (4) the results of chest x-ray and other special studies in those patients where such tests were performed, (5) the subsequent course of the uveitis, and (6) the histological examination of an eye in 47 cases.

From both the clinical and histological viewpoints uveitis may be divided into granulomatous and non-granulomatous types. Granulomatous uveitis, caused by tuberculosis, syphilis, sarcoid, Brucellosis and possibly other of the infectious granulomata, is characterized by a tendency to chronicity, relatively slight exudative reaction, the formation of nodular epitheliod cell lesions (at times visible in the iris) and by rather extensive tissue destruction and connective tissue replacement. Koeppe nodules as well as iris nodules invariably indicate an epitheliod cell response and consequently a granulomatous uveitis, and large mutton fat K.P. almost always indicate the same thing. However, a lack of iris or Koeppe nodules or of mutton fat K.P. by no means indicates that an anterior eveitis is not granulomatous in nature, because in about half of such cases only medium-sized lymphocytic K. P. are observed. Non-granulomatous uveitis, caused by foci of infection, bacterial allergy or whatever one decides to designate as the cause, is characterized in general by a more acute course, by considerable exudation of the serous or plastic type but relatively little tissue destruction, and by the absence of epitheliod cell nodules. As a rule the K.P. are either very fine cellular polymorphonuclear deposits, or medium-sized lymphocytic deposits.

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*Read before the Section on Eye, Ear, Nose and Throat at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, Miss., May 13, 1941.

Since a differentiation between granulomatous and non-granulomatous uveitis can often be made with considerable accuracy from the clinical ocular picture alone, it constitutes an important but rarely the final step in etiological diagnosis. Histological examination of an enucleated eye permits a conclusive etiological diagnosis in less than half the instances where such material becomes available, and cultures or animal inoculations of aqueous or excised iris tissue have proved fruitless as a diagnostic procedure in the hands of almost all investigators. It is therefore necessary to utilize indirect evidence as a part of the etiological determination. In order that this present study should be of statistical value, it is necessary to formulate and adhere to certain definite criteria for weighing this indirect evidence in the classification of each individual case. These criteria are given in detail in the appendix, and are summarized under a discussion of the individual etiological factors.

TABLE II: Etiological diagnosis, either definite or presumptive, in 562 cases of uveitis (all percentages based on entire series of 562 cases)

Etiological factor	Group I: 244 cases with definite evidence of etiology		Group II: 318 cases with presumptive evidence of etiology		TOTAL (502 cases)	
	No. of cases	Percentage	No. of cases	Percentage	No. of cases	Percentage
Tuberculosis	132	23.5%	147	26.1%	279	49.7%
Syphilis	45	8.0%	14	2.5%	59	10.5%
Sarcoid	3	0.5%	0	0.0%	3	0.5%
Brucellosis	1	0.2%	1	0.2%	2	0.4%
Foci of infection ..	31	5.5%	116	20.6%	147	26.1%
Gonorrhea	10	1.8%	16	2.8%	26	4.6%
Non-granulomatous systemic disease .	14	2.5%	19	3.4%	33	5.9%
Metabolic disease .	0	0.0%	3	0.5%	3	0.5%
Miscellaneous	8	1.4%	2	0.4%	10	0.5%
TOTAL	244	43.4%	318	56.5%	562	100.0%

The 562 cases analyzed fall into two general groups. (Table II) The first group consists of 244 cases in which the sum total of all available evidence pointed so clearly to some one etiological factor that a definite diagnosis appeared justified. With the exception of those cases attributed to foci of infection, where fulfillment of even the most rigid criteria yields only presumptive evidence of the etiology, and possibly of a few cases attributed to tuberculosis but which may have been caused by Brucellosis or sarcoid, the classification of cases in this group is probably subject to very small error. The second group consists of the remaining 314 cases, in which the evidence was considered too inconclusive to permit more than a fair guess as to the cause of the uveitis.

TABLE III. Intracutaneous reactivity to tuberculin of tuberculous and non-tuberculous uveitis cases

Type	No. of cases	Positive to 0.001 mgms	Positive to 0.01 mgms	Positive to 0.1 mgms.	Positive to 1.0 mgms.	Insensitive as far as test was carried
Tbc. uveitis	270	43%	34%	14%	3%	6%
Non-tbc. uveitis	249	11%	29%	29%	7%	23%

TABLE IV. Intracutaneous reactivity to tuberculin in definitely diagnosed tuberculous uveitis

A. Cases where clinical diagnosis was made without regard to tuberculin sensitivity (Criteria 1, 2, 3, or 4—see text).
B. Histologically diagnosed cases with record of tuberculin sensitivity.

Type	No of cases	Positive to 0.001 mgms.	Positive to 0.01 mgms.	Positive to 0.1 mgms.	Positive to 1.0 mgms.	Insensitive as far as test was carried
A	67	55%	28%	8%	6%	4%
B	14	36%	21%	21%	0%	21%

Tuberculosis: Tuberculosis was thought to be the cause of the uveitis in approximately half the cases. This high percentage is undoubtedly due to the fact that tuberculous uveitis is more often severe enough to warrant hospitalization than are other types.

In general, a diagnosis of tuberculous uveitis was made by the recognition of the ocular inflammation as probably granulomatous in nature and the exclusion of other possible granulomatous causes (of which syphillis is the most important), only slight corroborative evidence being obtained from the demonstration of cutaneous tuberculin hypersensitivity or the demonstration of a systemic tuberculous focus.

Our skepticism over the significance of the tuberculin reaction is supported by modern experimental work which indicates that the antigenic stimulus from a tuberculous focus in the eye is insufficient to influence to any appreciable degree the cutaneous reactivity to tuberculin. However, a high degree of cutaneous reactivity to tuberculin does slightly enhance the probability of a correct diagnosis of ocular tuberculosis. (Table III) Thus an appreciably higher percentage of patients in the tuberculous group reacted to 1-1000 mgm. of O.T. than in the non-tuberculous group, and an appreciably lower percentage were insensitive. In order to answer the very valid criticism that a high sensitivity to tuberculin *was* used in some instances as the deciding evidence for classifying those cases as tuberculous, it is necessary to analyze these figures further. Table IV lists the tuberculin reactions in 67 cases of definitely (Group I) tuberculous cases, in which the diagnosis was made with no regard to the tuberculin sensitivity—that is, made on the basis of histological examination, the occurrence of a focal reaction in the eye during therapy, or the presence of iris or Koeppe nodules, or of an interstitial keratitis or deep scleritis, and the elimination of syphilis, sarcoid, and Brucellosis as factors. Also, the tuberculin reactions in 14 cases of histologically diagnosed tuberculous uveitis are given. In these two groups the same relatively high degree of hypersensitivity is seen.

According to most German reports, x-ray studies of the chest disclose evidence of a healed or active pulmonary tuberculosis in from 70% to 100% of all patients with ocular tuberculosis. Our figures are not so conclusive. (Table V) Beginning in 1935, the roentgenologist was requested to make a special note on the presence or absence of any evidence of calcified or enlarged hilar or mediastinal glands. In 72 patients with "definite" or "probable" tuberculous uveitis who had chest x-ray after this date, 46% showed evidence of systemic tuberculosis, and in a group of 20 patients in whom a definite diagnosis could be made without regard to the results of the x-ray a tuberculous focus could be demonstrated in 60%.

It is apparent that the demonstration of a high cutaneous sensitivity to tuberculin or the demonstration of an active or healed systemic tuberculous focus does slightly enhance the probability of a diagnosis of ocular tuberculosis being correct, but that in any individual case little reliance can be placed either on positive or negative evidence of this sort. The margin of error is too great.

The accuracy of diagnosis of tuberculous uveitis is not greatly enhanced by response to therapy, since no therapeutic agent at present available will eradicate tubercle bacilli from the body. Tuberculin therapy has long been thought to have a favorable effect on ocular tuberculosis by many, if not most, ophthalmologists. Adequate statistical proof of this contention is lacking because of the practical difficulty of obtaining a satisfactory control series, but in all probability it is correct. The effect of tuberculin is certainly not an immediate one, however, being almost undoubtedly dependent on a gradual reduction of ocular sensitivity. That subcutaneous tuberculin therapy does reduce skin sensitivity and therefore presumably local sensitivity in the majority of instances is clearly shown in Table VI. This table also demonstrates, however, that sensitization is a slow process and cannot be accomplished in every patient. The response to tuberculin therapy is therefore of very limited value in establishing an etiological diagnosis in any individual case, unless a focal reaction is inadvertently obtained in the eye during the course of tuberculin therapy.

TABLE V. Roentgenograms of chest in patients with tuberculous uveitis
After 1935

Type	No. of cases	Active pulmonary t. b.	Inactive pulmonary t. b.	Calcified or enlarged hilar glands	Negative chest plate
Definite and probable tbc. uveitis	72	3%	11%	32%	54%
Selected cases where diagnosis was made without regard to chestplate*	20	10%	15%	35%	40%

*Satisfying criteria 1, 2, 3 or 4 for "definite" diagnosis—see text.

SYPHILIS: The greater number of syphilitic cases are classified in Group I as clear-cut diagnoses, because when syphilis is the cause of uveitis it can usually be readily proved by the ocular picture, the Wassermann reaction, and the response to therapy. The low percentage of cases in this group as a whole is probably due to the fact that since etiological diagnosis of these cases is easy, and treatment can usually be carried out quite as well in the out-patient department as in the wards, relatively few of them are admitted to the hospital. A blood Wassermann reaction was performed on every patient in this series, and syphilis was detected in only 69 instances; therefore the percentage of cases attributed to syphilis cannot be regarded as too low.

TABLE VI. Effect of subcutaneous tuberculin therapy on intracutaneous tuberculin sensitivity

Duration of tuberculin therapy	Number of patients	Effect on cutaneous tuberculin sensitivity Decreased	Unchanged	Increased
1 to 2 years..............	9	44%	44%	11%
Over 2 years	26	65%	27%	9%
TOTAL	35	60%	31%	8%

The most interesting feature of this syphilitic group is the very small number of cases of choroiditis, there being only three cases of choroiditis due to acquired syphilis. The diffuse choroiditis of secondary syphilis is one of the most serious forms of ocular syphilis; it is therefore quite interesting that in a large general hospital with an active syphilis clinic, there were encountered in 14 years only three cases of acquired syphilitic choroiditis of sufficient severity to warrant admission to the wards.

SARCOID—BRUCELLOSIS: The study is of no value on the incidence of uveal disease due to sarcoid or Brucellosis, because serological tests for Burcellosis and biopsy of a lymph node for sarcoid were not made routine in the Wilmer Institute until 1939.

FOCI OF INFECTION: A causal relationship between foci of infection and uveitis was assumed if the uveitis appeared to be non-granulomatous in nature, if there was an infected focus in the teeth, tonsils, nasal sinuses or genito-urinary tract, and if no other more logical factor could be found. A definite relationship was assumed if there was any alteration in the uveal inflammation following an alteration in the focus of infection, regardless of the presence or absence of any undue cutaneous reactivity of the patient to organisms isolated from the focus. Even with the somewhat mild requirements adopted, however, only 5.5% of the total cases could be attributed to foci of infection with any degree of assurance. The classification of cases as "probably" due to foci of infection is even more open to criticism. In a group of 507 controls without uveitis, the incidence of foci of infection proved to be essentially identical with that found in the uveitis series as a whole. (Table VII) Thus the mere finding of a focus of infection in a patient with uveitis is no valid proof of a causal relationship, and the cases in this group might better be classed as "unknown" or as due to bacterial allergy.

TABLE VII. Comparison of the incidence of dental and sinus infections in 523 patients with endogenous uveitis and in 507 controls.

	Focus of Infection Teeth	Sinuses
Uveitis series ...	27.1%	12.4%
Control series ...	25.8%	13.0%

During the past 15 years there has developed an ever-increasing skepticism as to the importance of focal infection in general medicine. This skepticism is based primarily on the facts that primary foci of infection have been found to be as common in otherwise normal individuals as in those who develop secondary endogenous inflammations, and that adequate statistical studies have demonstrated that no clinical benefit whatever is derived from eradicating primary foci in such diseases as rheumatic fever, rheumatoid arthritis, or nephritis.

Probably the most significant clinical evidence in support of foci of infection causing uveitis is contained in the report of Irons and Brown published in 1926. These authors were able to follow-up 40 patients with iritis originally believed due to foci of infection, whom they had examined 3 to 12 years previously.

The primary focus had been effectually removed in 33, and not a single one of these suffered a recurrence of iritis. On the other hand, 2 out of the 7 patients in whom the primary foci had not been eradicated developed recurrences of iritis.

Our figures, however, are in sharp contrast to those reported by Irons and Brown. (Table VII) Thus in 74 cases with similar follow-up periods and the same incidence of previous attacks of uveitis, the incidence of recurrence was essentially the same whether the foci had been totally eradicated, partially removed, or not removed.

It is indisputable that many cases of non-granulomatous uveitis are seen in which there is no demonstrable cause other than the presence of foci of infection. However, it is likewise true that exactly similar cases occur without any clinically demonstrable foci, and without evidence of any other etiological factors. (These cases are classified in this series as due to unknown systemic infection, but might just as well be classed as of unknown etiology.) A broad concept which will explain *all* of these cases presupposes that all mucous surfaces, as well as definite localized infections, may act as portals of entry for bacteria into the blood stream. That bacteria do constantly enter the blood stream in normal individuals is well known. For example, B. coli can often be cultivated from the portal vein. If it is assumed that bacteria, not necessarily pathogenic, do occasionally reach the uveal tract, they may well create there a localized sensitivity. Any subsequent bombardment of this sensitized foci by these antigens would cause a local inflammation. In fact, such inflammations can readily be produced in experimental animals. Such a mechanism will not only explain the endogenous uveitis, but will likewise explain the impossibility of culturing bacteria from such eyes.

Despite the negative evidence in this paper, primary foci of infection may be and in certain instances probably are the direct cause of uveitis. But the role of specific primary infections is certainly not as great as once believed, and little or nothing is to be gained by the indiscriminate eradication of infections of the teeth, tonsils, sinuses, or genito-urinary tract.

GONOCOCCI: A positive diagnosis of gonococcal uveitis was made if there was active urethritis, prostatitis, or g-c arthritis at the onset of the uveitis, and no other more logical factor. A presumptive diagnosis was made if there was a history of gonorrhea, or a positive g-c complement fixation test, and no other logical factor.

TABLE VIII. Effect of Removal of Foci of Infection on Recurrences of Uveitis

Treatment of foci of infection	No. of Patients	Avg. period followed	Previous attacks	Recurrences
Not removed	21	4.2 years	67%	29%
Partially removed	11	3.8 years	73%	36%
Totally removed	42	4.5 years	55%	33%

One point of interest is the fact that exudation of fibrin into the aqueous was observed in only 10 patients in this group, and was present in 45 other patients in this series who definitely had never had gonorrhea. This fact is mentioned because at one time a very acute iritis with fibrinous exudation was considered characteristic of gonorrhea. Whether gonococcal uveitis is a true metastatic infection or whether it is an allergic type of reaction similar to that postulated for the foci of infection cases is still a moot question, the second mechanism appearing the more likely.

OTHER. In passing, I would like to mention that rheumatoid arthritis was observed in association with uveitis in only 8 cases. Diabetes was found in only 8 patients, in spite of the fact that a fasting blood sugar was performed on every patient. Gout was discovered in only one instance, although a blood uric acid determined was performed in approximately half the cases.

In summary, I have emphasized the following points:

1. That uveitis may often, if not usually, be recognized clinically as granulomatous or non-granulomatous.

2. That a diagnosis of ocular tuberculosis must depend more on the clinical picture and the exclusion of other factors than on tuberculin reactions and chest x-rays or response to tuberculin therapy.

3. That syphilitic uveitis is usually easy to diagnose, and that acquired syphilitic choroiditis is very rare.

4. That in this group of patients foci of infection were no more common than in a control group, and that removal of infection foci did not reduce the incidence of recurrences.

5. And that most cases of non-granulomatous uveitis can be explained by transient bacteriemias from clinically non-infected mucous surfaces as well as from clinically apparent infections, and by the development of local ocular sensitivity to those bacterial antigens.

APPENDIX

Criteria for Etiological Classification

TUBERCULOSIS: The criteria adopted for a positive diagnosis of ocular tuberculosis and the number of cases in each of the various sub-groups were as follows:

1. A histological diagnosis of tuberculosis in the enucleated eye—17 cases.

2. The occurrence of a focal reaction following the therapeutic use of tuberculin, in the eye of a patient in whom a presumptive diagnosis of ocular tuberculosis was justified because of the clinical picture and course of the lesion and the diagnostic survey—18 cases.

3. The development of so-called "characteristic" nodular lesions (either iris nodules or Koeppe nodules) in patients without evidence of syphilis, sarcoid, or Brucellosis—22 cases.

4. The development of an associated retinal perivasculitis, deep scleritis, sclero-keratitis, or interstitial keratitis in cases where syphilis could be definitely excluded, and where the uveitis ran a course and showed clinical findings consistent with tuberculosis—15 cases.

5. A pronounced tendency of the uveitis to chronicity and recurrence, with mutton-fat deposits on the posterior surface of the cornea if there was anterior involvement, in patients with evidences of healed or active systemic tuberculosis or with a tuberculin sensitivity to 0.001 or 0.01 mgms. of O. T. intracutaneously and in whom all other known etiological factors could be excluded—60 cases.

The criteria adopted for a presumptive or probable diagnosis of tuberculosis were as follows:

1. The occurrence of so-called "characteristic" iris nodules or Koeppe nodules in an eye with a general picture very suggestive of tuberculosis, but in a patient in whom the possibility of other infectious granulomata could not be excluded.

2. Evidences of healed or active systemic tuberculosis, a high degree of tuberculin hypersensitivity, or a course and clinical appearance of the ocular lesion suggestive of tuberculosis, in patients with no evidence of any other possible etiology.

3. Evidence of systemic tuberculosis or a high sensitivity to tuberculin in patients with evidences also of either syphilis or foci of infection, but with a clinical course characterized by chronicity and recurrences or with other lesions suggestive of tuberculosis (Class 4, Group 1), and no evident relationship of the ocular disease to either foci of infection or syphilis.

SYPHILIS: The criteria for a definite diagnosis of syphilitic uveitis were as follows:

1. A characteristic uveal lesion, characterized by nodules or gummata occurring either in early or late syphilis, but in the proper time relationship to the acquisition of the syphilis.

2. Lesions which were non-characteristic of syphilis, but which occurred at the proper stage of early syphilis and responded favorably to anti-syphilitic treatment.

3. Uveal lesions, non-characteristic in appearance, occurring in late syphilis and responding favorably to proper anti-syphilitic treatment, in patients with no other demonstrable etiological factors. In all of these three groups the diagnosis of systemic syphilis was clearly established by positive serology and physical examination.

The criteria for a presumptive diagnosis of syphilitic etiology were: 1) The presence of systemic syphilis and a favorable response of the ocular lesion to anti-syphilitic treatment, even though other possible etiological factors were found. 2) The presence of syphilis, and the exclusion of other etiological factors even though the response to anti-syphilitic therapy was unsatisfactory.

FOCI OF INFECTION: The criteria adopted for a definite diagnosis of etiological relationship between uveitis and foci of infection were: That there be a demonstrable focus of infection in the teeth, tonsils, accessory nasal sinuses, or a non-gonorrheal infection of the genito-urinary tract, and in addition either 1) that the uveitis follow the onset or an exacerbation of activity in the focus of infection, 2) that the ocular inflammation show a definite alteration after eradication of the focus of infection (either an abrupt healing, or a local intensification of the inflammation followed by healing), or 3) that the uveitis exhibit the acute serous type of reaction usually believed due to foci of infection, that there be a demonstrable focus of infection severe enough to produce definite symptoms of itself, and that the complete diagnostic survey reveal no other etiological factor to which the uveitis might logically or probably be attributed.

The criteria for a probable diagnosis of etiological relationship between uveitis and foci of infection were that the ocular lesion showed none of the characteristic changes produced by the infectious granulomata, that the diagnostic survey did not reveal any other findings to which the uveitis might logically be attributed, and that the survey did reveal a clinical focus of infection, even though it be asymptomatic.

GONOCOCCAL INFECTIONS:

The criteria for a positive diagnosis of gonococcal uveitis were that the clinical appearance and course of the eye lesion be compatible with a gonococcal infection, that the first attack occur during the course of an active gonorrheal urethritis or prostatitis or in conjunction with a gonococcal arthritis, and that there be no other etiological factors disclosed in the diagnostic survey to which the ocular lesion might be more logically attributed.

The criteria for a presumptive or probable diagnosis of gonococcal uveitis were that even though there was no active gonorrhea or arthritis at the time of the first eye inflammation, that there be no other etiological factors disclosed in the survey to which the uveitis might logically be attributed, and that there should be a history of gonorrhea or a positive gonococcus complement fixation test.

DISCUSSION

DR. A. G. WILDE (Jackson): The various components of the uvea, i.e iris, ciliary body and choroid, are so intimately merged anatomically, that an inflammatory process of one would necessarily involve the second or third. The distinction of iritis, cyclitis and choroiditis is clinically convenient, and conveys the idea as to which shows the predominant symptoms.

A purely statistical study such as Dr. Guyton has presented does not lend itself readily to discussion in the limited time available. As was first brought out by Jenner, the discoverer of vaccination, an analysis of clinical data of this kind, done with an open mind and followed out irrespective of where it might lead, is the only accurate approach to any question. The "Q. E. D.'s" thus drawn are liable to clash with or run counter to prior conclusions. Probably there is nothing more painful than colliding abruptly with a new idea, or being bumped along a path away from fixed convictions and mental habits.

It is noted that Dr. Guyton states that the concept of primary foci of infection causing remote secondary inflammation, was suggested during the latter part of the nineteenth century. As a matter of fact, this association was noted and commented on by Dr. Benjamin Rush, one of the signers of the Declaration of Independence.

Uveal tissue, being highly specialized in function, and equipped with an abundant blood supply, is naturally liable to involvement either in general infection, or a local one that by harboring infective material under pressure can at times push showers of infective particles into the bloodstream.

While such infection of the uvea can be recognized clinically, its source or type is often uncertain. Once established it bears no label as to its origin. When I first began the practice of ophthalmology, diagnosis of the type of uveitis on hand was the essence of simplicity. Up to the age of about forty, such cases were by common consent classed as "syphilitic." After that hurdle in time, they became "rheumatic," probably as a concession to age. As there was no way of proving either, and as all such patients were compelled to run the gauntlet of intensive medication, both mercurial and salicylic, they could be ascribed to whatever source the observer favored.

Our present diagnostic methods and criteria have played particular "Ned" with that process. But even yet we are a long way from an accurate clinical differentiation of the many possibilities. The course and clinical appearance of these are often so similar that the final word can only be said after a section of the eye has been made, and its pathologic study completed. The conclusion thus drawn, while undoubtedly gratifying to the observer, really adds little to the visual powers of the patient.

This fact was brought home to me recently by a man with a definite uveitis, who among other things showed a positive Wassermann, unmistakable evidence of active pulmonary tuberculosis, several periapical dental abscesses, and chronic prostatitis. Of course we attacked all of these simultaneously, hoping in the general house-cleaning that the offending source would be eliminated. As the condition eventually improved, we were apparently successful in everything except being able to point our finger at the primary offender. It is evident that co-existing lesions of this kind will always complicate statistics, however carefully collected and analyzed.

The real objection of mass studies, such as Dr. Guyton has undertaken, is to draw the line where fancy stops, and fact begins. Superficial impressions from individual cases are usually fragmentary and always of uncertain value. Actuaries have found that the law of probabilities holds true in all lines of endeavor. By recognizing this and keeping in mind the "usual facts," we will in the long run be more frequently and more intimately associated with the truth.

I have frequently verified the observation that local reactions in the eye are liable to become exaggerated after any manipulation of its primary source of infection. This seems to produce a flood of infectious matter, and when the eye flares up simultaneously it can be assumed that the two are inter-related. But it must also be added that a failure so to react does not prove that the two have no connection.

The conception of focal infection from dental origin was distinctly American. It was long ignored in European circles, where the majority of uveitis cases continued to bear the tubercular label. This failure to recognize what to us was quite evident continued to puzzle me until I had an opportunity to work in several European clinics, and there the mystery was solved. Modern dentistry, that is clinical dentistry, is among their several "have nots." The famous medical centers of Europe have made little dental advances beyond the tooth-pulling facilities prevalent is this country forty years ago.

The division of uveitis into the granulomatous and non-granulomatous types, such as Dr. Guyton has given, provides a rough but serviceable springboard from which we may plunge, and come up with something worth while clinically.

The granulomatous type, i.e. the tubercular, syphilitic and possibly a few rare conditions have certain things in common. These are: (1) appearing usually in the later age groups, (2) slowness of onset, (3) less severe pain, (4) less local reaction, (5) greater and more permanent disintegration of eye structures. This combination gives us a diagnostic toe-hold.

The more acute, more painful, and more rapidly progressive involvements are usually those associated with pyogenic foci that are under pressure. Those localities that discharge freely externally are not productive of distant infection. The pyogenic source when once eliminated ceases its distant involvement, and the return to normal of the eye both anatomically and visually can be with dramatic abruptness.

As a further aid to this differentiation, Dr. Guyton has noted variations in the cellular exudates. Polymorphonuclear leucocytes, characteristic of pyogenic foci, remain diffuse as a cloud in the aqueous that eventually comes to be deposited on the corneal or lens surfaces.

The lymphocytic and epitheliod cells of the granulomatous varieties agglutinate into droplets, that assume a whitish appearance, and eventually adhere to the posterior corneal surface as the long recognized "K. P." erroneously termed "keratitis punctata."

Pelvic Endometriosis*

DR J. F. LUCAS
GREENWOOD, MISS.

THE PROBLEM of pelvic endometriosis is an intensely interesting problem for those of us who are chiefly concerned with diseases of women. It is not a rare or microscopic disease, but occurs as one of the most common conditions seen by the gynecologist, the lesions varying in size from small bluish vesicles one to two cm. in diameter to lesions that fill the whole female pelvis.

Endometriosis was defined by Kelly as "certain lesions characterized histologically by their content of epithelium resembling uterine or tubal mucosa which responds physiologically to the stimulus of menstruation and to the changes of pregnancy". Von Recklinghausen and Cullen, at the end of the last century, described the condition in full detail, but it was not until Sampson's important contribution in 1921 that the subject was seriously considered. In spite of the fact that in recent years endometriosis has been recognized with increasing frequency and numerous papers appear each year, it remains to many surgeons an unfamiliar lesion, its relative frequency unappreciated, its clinical appearance not always recognized, and its treatment often unsatisfactory.

The lesions occur in the following order of frequency: in the uterine wall as a generalized adenomyosis or as a definite localized tumor formation; in the ovary leading to chocolate or tarry cysts formation; or general implants over the pelvic peritoneum, especially the cul-de-sac of Douglas, involving the uterosacral ligaments and in severe cases infiltrating the rectovaginal septum. Other less common locations include abdominal scars following previous operation on the uterus or tubes, the umbilicus, round ligament, inguinal canal, bladder wall, vagina, perineum, sigmoid colon, appendix and small intestine. More recently, Swartz reported a case in which the chief symptom was regular monthly bleeding from the bronchus and in which a biopsy revealed typical endometrial tissue. In recent German literature there was a report of endometrial tissue found in the thigh and forearm.

Much has been written and a marked difference of opinion exists as to the mode of origin of these various endometrial ectopic lesions. No one theory explains satisfactorily all the lesions. Like eclampsia, endometriosis may be truly called a disease of theories, as more suggestions as to its origin have been offered than for any other phase of pelvic pathology.

In recent years there has been a tendency to agree that the etiology of endometriosis cannot be satisfactorily explained in all instances by a single theory and that we must accept the three principle theories of etiology:[6] (1) development of embryonic rests of the mullerian ducts or Wolffian bodies as a result of the proper genetic force (probably hormones); (2) metaplasia of the serosal epithelium into endometrial tissue as a result of the proper genetic force (probably hormones), on the basis that all tissues which have the coelom as a common anlage have the potentiality of developing endometrium if properly influenced; (3) implantation of living endometrial tissue on the ovaries and pelvic peritoneum by retrograde menstruation and possibly in other locations by metastasis of living endometrial tissue through the veins or lymph vessels. The latter theory, so ably advocated and defended by Sampson, probably explains all but the exceptional case.

PATHOLOGY

Endometriomatous lesions, wherever found, have the histologic and functional characteristics of uterine endometrium and respond to all stages of the menstrual cycle. Regression takes place with the menopause, whether artificial or natural. The lesions may be conveniently divided into (1) internal endometriosis or adenomyosis and (2) external endometriosis. Internal endometriosis or adenomyosis probably accounts for well over 60% of the cases, according to recent statistical reports, and can be divided into three main varieties corresponding very much to the usual classification of fibromyomata of the uterus. (a) Diffuse uterine adenomyomata involve the uterine wall, are not demarcated or encapsulated as are fibromyomata. The uterus is enlarged to two or three times the normal size but the normal outline of the uterus is retained although it may be somewhat irregular. On section, homogeneous translucent areas resembling mucus membrane may be seen scattered through a thickened, coarsely striated portion of the wall. These areas are usually brownish in color due to extravasated menstrual blood. (b) Subperitoneal and intraligamentous adenomyomata are peripheral tumors having their origin in the uterus and growing outward into the broad ligament or subperitoneally. They may become pedunculated, very large, and cystic. being filled with chocolate-colored blood extravasated from the ectopic endometrial lining. (c) Submucous adenomyomata are diffuse, having protruded into the uterine cavity and become polypoid, at times even extending through the cervix into the vagina.

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External endometriosis includes those lesions occurring outside the uterus. The most common location is in the ovary but any pelvic organ may be involved. The usual lesions found in the ovary are either tiny bluish cysts or puckered reddish-blue depressed scars, or, progressing further, adherent cysts filled with thick, syrupy, chocolate-colored fluid, known as chocolate cysts of the ovary. The escape of chocolate colored fluid from a densely adherent ovarian cyst may be the first indication at operation that one is dealing with a case of pelvic endometriosis. The lesions also occur on the tubes and pelvic peritoneum, especially involving the uterosacral ligaments and rectovaginal septum, where puckering and scarring lead to firm fibrous unyielding adhesions and produce nodules which, when felt on rectovaginal examination are practically diagnostic of endometriosis. Implants are also found on the appendix, ileum, sigmoid and rectum. The involved surfaces become more and more scarred, thickened and adherent as they are repeatedly seeded with new crops of implants. The lesions vary from a chance finding of a small blue-domed vesicle on an ovary, to a complete involvement of all the pelvic organs and loops of bowel in a tangled mass held together by extremely dense adhesions. Partial bowel obstruction as well as hydronephrosis from periureteral infiltration has been reported.

A characteristic feature of endometriosis is its common association with other pelvic conditions which often overshadow both the symptoms and physical findings of endometriosis. Uterine fibroids predominate among the associated lesions occurring in 64% of 307 cases reported by Payne.[7] Varying degrees of adnexal inflammation occurred in 19% of his patients.

The high incidence of this condition is illustrated by the report of Sampson[8], who found endometriosis in 43% of abdominal operations on women between the ages of 30 and 50. Many, of course, showed such slight involvement that they produced no symptoms. Meigs[9], of Boston, in a report of cases taken from his private practice, noted an incidence of 16.7% of all gynecological cases and 32.2% of all abdominal gynecological cases operated. Douglas[10] states that for every 100 cases of uterine fibroids there are 25 cases of external endometriosis and 6 cases of internal endometriosis. Ten per cent of all laparotomies done by him in a 11½-year period had external endometriosis. Counsellor, of the Mayo Clinic, reported 884 cases seen at the clinic from 1923 to 1937.

The majority of these cases occurred in the third and fourth decade. Meigs, in an analysis of his cases, noted there were two types of patients who have endometriosis: those that are normal in every way except that marriage and pregnancy, especially pregnancy, were delayed, and (2) those who have a stigma of pelvic underdevelopment. He advanced the theory that women with a stigma of underdevelopment, many of whom do not marry because they are also underdeveloped sexually, and well-developed women, who put off marriage too long or who try to put off pregnancy until well after married life has begun, are likely to develop endometriosis. This prolonged menstrual life without interruption by pregnancy allows too prolonged and uninterrupted stimulation of the hormones, estrin and progestin, unutilized cells of the cœlum may become muellerian or uterine and thus produce endometriosis.

Mallory[12] noted that the incidence was much greater in private patients than among general hospital patients. Extremely fertile women rarely develop endometriosis. Other pelvic lesions such as fibroids, retrodisplacements, cervical strictures and inflamed adnexa are often associated lesions.

The most important clinical symptoms in the order of their frequency are acquired dysmenorrhea; backache, often extending down the thighs; dyspareunia; increased or irregular bleeding often due to associated lesions; pelvic pain or jarring, as in walking or car riding; low-grade or acute bowel obstruction; and frequency pain on urination. The patient with large chocolate cysts often has few implants and usually seeks treatment for a disturbance of menstruation, while the patient with dysmenorrhea will reveal invasion of the uterine wall or numerous implants on the pelvic peritoneum. The location of the pain distribution will often help in determining the location of the lesion. The patient with acquired dysmenorrhea that is progressive, invasion of the uterine wall should be suspected. Pain referred to the inguinal region suggests endometriosis of the round ligament. Pain referred to the groin and inner side of the thigh suggests endometriosis involving the broad and ovarian ligaments. Lesions of the rectovaginal septum cause distress referred to the anus. Lesions involving the bladder resemble cystitis in symptoms. All pain is aggravated at the menstrual time. Often endometriosis is first recognized when a search is being made for woman's failure to conceive. The incidence of sterility is high. It is variously estimated that 30% to 70% of the patients with endometriosis are sterile.

The clinical history as well as a thorough pelvic examination is most helpful in making a diagnosis of misplaced endometrial tissue in the female pelvis. In a patient who is sterile. with a history of acquired dysmenorrhea and pelvic findings of an adherent small ovarian cyst, a tender nodule or induration back of the cervix and an adherent retrodisplaced uterus, one must concede that pelvic endometriosis is the most likely diagnosis. This deduction presupposes that gonococcal and postabortive inflammation can be excluded as a possible cause. Often it is difficult to distinguish between chronic pelvic inflammation and endometriosis. It has been noticed that in treating these cases with pelvic heating by the use of the Elliott machine, if the pain is increased endometriosis is suspected.

TREATMENT;

Like other gynecological conditions it is important that a diagnosis be made so that the situation can be discussed in detail with the patient. Her desires are often the most important factor in determining when treatment shall be instituted and how extensive it shall be. In considering treatment it is of paramount importance to remember (1) that the lesions though benign have semimaligant characteristics in that they invade, and (2) the lesions are entirely dependent on ovarian activity for their continued growth and development. As endometriosis is a disease of comparatively young women in the prime of life, its management demands mature surgical judgment with conservatism of ovarian tissue as the guiding principle. The pelvic surgeon who at the operating table encounters an extensive, previously undiagnosed pelvic endometriosis finds himself in a serious dilemma. He may be damned as a butcher if he removes the ovaries and induces a premature menopause, or be damned for his lack of courage if he conserves ovarian tissue when he cannot remove all the endometriosis, thus possibly not relieving the patient of her symptoms and making another operation a possibility.

Generally speaking one must be governed in his choice of treatment by the age of the patient, her social status, her desire for children, the extent of the diseased process as well as the amount of discomfort. The commonly associated lesions so often determine the extent of surgery indicated. In all age groups, isolated lesions which are readily removed should be treated by extirpation. If complete removal is impossible or dangerous, cauterization by superficial searing with the small nasal tip cautery point may give complete relief. These smaller lesions are frequently encountered incidental to removal of fibroids.

At times the majority of the lesions can be removed and an essentially healthy uterus, along with one tube and ovary or part of an ovary can be saved. Such conservation means a great deal to the comparatively young individual. who menstruates, who has a chance of becoming pregnant and is saved from the miseries of a premature menopause. The majority are willing to run the risk of having to submit to a second operation, if they can be given a chance to conceive, and are allowed to retain the vim and vigor of youth for a few more years. The disease usually does not progress again to a stage where the patient has symptoms. In all cases where conservatism is practiced it is a wise procedure to do a uterine suspension and a presacral nerve resection as a routine. Presacral sympathectomy relieves pain in the uterus, tubes, and to a limited extent the upper vagina and the anterior wall of the cul-de-sac. Cook has used successfully, in ovarian endometriosis, the division of the ovarian nerves by dividing the ovarian arteries and veins and ligating each cut end. He found this entirely satisfactory in relieving ovarian pain without any sequelae in the form of disturbance of ovarian function.

The presence of widely disseminated invasive growths which render removal impractical or impossible, necessitates either radical surgical removal of both ovaries or destruction of ovarian function by irradiation. Surgery is preferable because it is impossible to determine clinically whether complete cessation of function of the ovary is advisable, and it is wiser to know whether there is any other associated pathological condition of the pelvic organs before submitting the patient to castration by radium or x-ray. An exception to this rule is an extensive involvement of the rectovaginal septum, as surgical removal is often difficult and may result in a rectal fistula. It may also be used after conservative surgery has failed or where the patient is seriously handicapped. From the operative standpoint irradiation may be used to check the increasing pain and disability from endometriosis. Surgery is preferable not only because preservation of ovarian activity is desired but it is necessary to eliminate malignancy as well as any mass causing pressure disturbance.

In operating on these cases of extensive endometriosis, especially where chocolate cysts are present, it is important to protect well the abdominal wall as well as the abdominal viscera from the inevitable spill of the contents of the cysts. Not only does implantation take place during the operative trauma but the fluid contents of the cysts are very irritating to the peritoneum and cause dense adhesions to form where they come in contact with any surface. Postoperative obstruction is not an uncommon complication after the contents of a large chocolate cyst have spilled in the abdomen. Where the bowel is involved extreme care must be taken in the separation of adhesions as the lesions cause dense adhesions that grow into the surrounding structures. The adhesions are not simple agglutination of surfaces, as in inflammation, but real tissue in growths into the wall of adjacent structures. The dense adhesions should be separated under sight and the line of separation should not be allowed to encroach on the intestinal wall. Most cases can be closed without drainage but where there has been a spill from a large cyst it has been my practice to institute drainage on account of the marked peritoneal reaction to contact with this irritating material.

I have attempted to discuss the pathology, symptomatology, diagnosis and treatment of this increasingly common condition. What about the prophylaxis or prevention of endometriosis? Of the numerous contributions little has been said of prophylaxis. If Sampson's theory is correct, much can be done to guard against the development of this condition. Women with a mobile retroversion should be followed carefully or the uterus premanently restored to its normal position. It has been only a few years since the correction of a retrodisplaced uterus was considered poor judgment and surgeons who advised these operations were accused of doing it for a fee. Most of us now feel that many of them cause symptoms and should be more often corrected surgically. Unrecognized or neglected stricture of the cervix causes retention of the menstrual blood and retrograde flow through the fallopian tubes with the possibility of endometriosis as a result. Stricture of the cervix has become a most common complication since cauterization has become such a common procedure. Cicatricial scars also follow amputation of the cervix and infections. Submucous fibroids and endometrial and cervical polyps may also cause obstruction to the normal flow of menstruation. Rough pelvic examinations or instrumentation near the time of menstruation should be avoided. Rubin tests should be performed only after the menstrual period, never just before a period or after a curettage as bits of endometrium may be blown through the tubes and into the pelvis. Cervical and vaginal packs should be seldom used as they obstruct the flow and encourage back pressure on the tubes. Hegar dilators have a pistonlike effect and may force fragments back through the tubes.

In conclusion, I am convinced that the most important factors in reducing the incidence of pelvic endometriosis would be to have all uteri in an upright position, with the cervix unobstructed, so that there would be free drainage of menstrual blood into the vagina, and no opportunity for retrograde menstruation through the tubes into the pelvic cavity.

REFERENCES

1. Counseller, Virgil S. Endometriosis. A clinical and surgical review. Collected papers of Mayo Clinic, 1938 p. 357.
2. Crile, George, Jr.: Endometriosis; A clinical study of thirty-seven cases. Cleveland Clinic Quart., 4:303 (Oct.) 1937.
3. Masson, J. C..: Surgical Significance of Endometriosis. Amnnals Surg. 102:819 (Nov.) 1935.
4. Novak, E.: Pelvic Endometriosis and Its Treatment, Am. J. Surg. 33:427 (Sept.) 1936.
5. Dougal, Daniel: The problem of endometriosis, Am. Jr. Obst. & Gyn. 35:373 (March) 1938.
6. Sampson, J. A. Perforating hemorrhagic (chocolate) cysts of ovary, their importance and especially, their relation to pelvic adenomas of endometrial type. Arch. Surg., 3.245 (Sept.) 1921.
7. Cullen, T. S.: The Distribution of Adenomyomas Containing Uterine Mucosa. Arch. 1:215 (Sept.) 1920.
8. Meigs, J. V. Endometriosis—A Possible Etiological Factor, Surg. Gyn & Obstet. 67:253 (Aug.) 1938.
9. Payne, Franklin L.: The Clinical Aspects of Pelvic Endometriosis, Am. J. Obst. & Gyn. 37 (March) 1940.
10. Sampson, J. A. The development of the implantation theory for the origin of peritoneal endometriosis. Am. J. Ob. & Gyn. 40:549 (OCT) 1940.

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Falls on the street cause about twice as many non-fatal injuries each year as automobile accidents, and a large majority of these street mishaps occur in the wintry months of December, January and February. Around 1800 Americans die annually from street falls.

Early Treatment of Fractures*

F. S. DIXON, M.D.
Superintendent, Charity Hospital
NATCHEZ, MISS.

IF WE COMPARE the treatment of fractures today with the treatment we received when as a boy we wore a board splint for a fractured arm, we cannot fail to note the advancements which have been made in this type of surgical practice. We cannot help admiring the skillful judgment, the keen sense of touch, the minute knowledge of anatomy which prepared a broken limb for its resumption of function. For today, with the rather universal use of the x-ray, with the numerous instruments and devices and provisions for better and more refined hospital care, we marvel at the results secured. There have been very marked changes in recent years in types of treatment: open operations, insertion of bone plates, pins, pegs, screws, wires and the use of countless devices. Basically the "setting" of a fracture today consists in traction, countertraction, manipulation and splinting, just as it was in the days of your youth. Though some of us may argue over the proper treatment of a compound fracture, or the device to be used, the functional results reflect the proper application of those basic principles, observation, study, experience, and the use of one's God-given powers.

"The management of fractures has within recent years attracted great attention because statistics prove that end-results are not what they should be." Reasons given have been a lack of proper teaching of fundamental principles in medical school, the lack of proper first aid, and the lack of use of, or overzealous use of, equipment. The first depends entirely upon our educators, the second upon the lay person, and the last most upon the doctor. Because the layman most frequently is called upon first to handle a fracture, the American Medical Association and the American College of Surgeons have thought it important to offer material assistance to the layman for accident care. Notably through the American Red Cross, first aid and care of the injured has been preached. This organization began in 1935 to set up wayside stations where splints, bandages and the like might be applied by instructed agents. These people are not doctors, nor are they to act as doctors, but are agents until doctors can be secured. It is, therefore, our duty because of the benefits accruing from their ministrations in saving life, to be their aid and instructors.

The early treatment of fractures means the care of the fracture from the time of the accident until definite treatment is instituted. Therefore, it accounts chronologically for the handling of a patient at the place of the accident, first aid, the transportation of the patient to the place of treatment, the making of a diagnosis and x-ray pictures. Likewise, it must account chronologically for the natural process of bone healing, for nature's processes commence without regard to the surgeon's treatment.

FIRST AID

Only by chance may a doctor be present at the time of an accident. Rarely in our rural sections is he available to furnish more than a small part of what we term first aid; less frequently still is he able to see a patient who has suffered an injury at the site of the accident, or before the patient has been moved. We so frequently see the injured for the first time in our offices, often after first aid has been rendered, and too often not the minimum first aid. Not infrequently we do not see the patient for hours or days after he has received home treatment in which kerosene, creosote, or soot have been applied to an open wound. A fracture case that came to us for attention demonstrates this point:

Mr. C. N., aged 63, a carpenter, fell from a scaffold while working on a baseball grandstand located about one-fourth mile outside the city limits, and suffered an injury to his left shoulder. Three fellow workmen provided countertraction, while another carpenter who had once seen a dislocated shoulder replaced, applied traction to the extremity. X-ray pictures showed a greatly displaced fracture of the surgical neck of the humerus.

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*Read before the Tri-Parish Medical Society at the July meeting.

The carpenter-foreman, who was reducing a dislocated shoulder is just an average American citizen who wanted not only to perform his part in first aid, but was going to do the doctor's job also — with exactly no knowledge of what *harm* he was doing.

HEALING OF FRACTURES

Nature's processes in the healing of fractures are not entirely known. We do know that depending upon the type and location of the fracture, and the severity of the injury upon surrounding soft parts, there is an infiltration and engagement of the tissues with blood, lymph and inflammatory exudate. Swelling of the part therefore increases in from 8 to 12 hours, and then begins to subside slowly. Within a few hours' time these liquid substances become a clot and granulation tissue forms between the broken ends of the bones, provided no soft parts are interposed. This becomes organized tissue usually within a week, and calcium derived from the bone is laid down upon this structure, forming a soft callus usually in about ten days. This soft callus, which resembles somewhat a spongy ball between apposed bone ends, begins to be replaced by a hard bone about the third week, and the surrounding soft callus is resorbed or replaced. From this point on the newly formed bone becomes harder, appearing normal both macroscopically and microscopically at the end of one year. I bring these to your attention for the following reasons:

1. A fracture can be more easily reduced when seen at the earliest possible moment. Swelling and organization of the clot make reposition more difficult.
2. An early reduction aids nature in quickly carrying out its healing processes.
3. By the converse, the greater the delay, the greater the swelling and damage to soft tissues, the longer the disability, the more extended and frequently more complicated the treatment, and the stronger the invitation to such complications as delayed or non-union.

"The injuries resulting from fractures are not limited to those occurring at the time of the accident. Unwise attempts to use the extremity may cause, or increase, displacement of fragments, increase the lacerations of soft parts and perhaps lead to penetration of skin by the ends of the bone." Proper handling of the case should follow a definite course:

TREAT SHOCK

Every accident case regardless of the severity is attended by shock of a greater or less degree. Time-honored treatment consists in sedative with morphine, application of heat by blankets, hot water bottles and warm drinks, and relief of the painful condition causing shock. That, of course, means prevention of further muscular spasms in the injured limb, or putting at rest the injured part.

If the patient is seen at the side of the accident, or away from the office to which he is to be transported, or if he is to be referred to a hospital, one should see that the injured part is at rest. In the case of injured extremities, I refer to some type of splint. A preliminary examination should always be made, quickly, carefully and gently; hemorrhage which may be present should be stopped, preferably by sterile pressure bandages, or possibly by the tourniquet.

In reminding you that a tentative diagnosis should be made at once and preparations made for transportation, I cannot fail to recall the man I saw who suffered a back injury while working on the Natchez Bridge:

Mr. A. J., aged 48, a welder, was struck in the region of the lumbar spine by a twelve-foot "I" beam being swung by a crane. When I arrived at the scene of the accident the carpenters decided that the spine was injured, and were building a wooden platform to serve as a stretcher. Believing that he had sustained a fracture, the man was carried by the crude stretcher to a railroad handcar and transported by this means to an ambulance and sent to the hospital. The x-ray pictures showed no fracture and the man returned to work within a week.

"SPLINT 'EM WHERE THEY LIE"

Splinting a fracture, or suspected fracture, before transportation should be done in every case, and regardless of the means of transportation. Various types of splints are recommended, from the ordinary board to those secured from surgical supply houses — such as the halfringed Keller-Blake splint for the lower extremities, and the Thomas-Murray hinged splint for the upper extremities. Expensive equipment is not necessary, a board extending from above the shoulder to the finger tips, well padded and bandaged, or a board extending along the side of the body to the foot, works very well. Several thicknesses of cardboard, a pillow, a folded magazine, a broom, have all been used, also tying the legs together, or bandaging the arm to the side of the body.

X-RAY DIAGNOSIS

The days of treating fractures, or examining suspected parts that have been injured, without the means of an x-ray, ended when such machines were so simplified and reduced in cost that they have become available to all. Therefore, as soon as the condition of the patient is such that he can be moved, a plate should be made of the injured area. I am reminded, in this connection, of an elderly lady in New Orleans who sustained an apparently slight injury as a result of a fall in her home. She was examined by a capable surgeon, who may have suggested a plate over the sore left femur. She nevertheless shortly thereafter consulted a chiropractor, who accidentally completed the fracture by manipulations. She was then in a little shock and not suffering severely — however, with every bump of the ambulance at the street intersections, she let out a groan. Quite against the patient's protests, I therefore had the driver stop and administered morphine.

Complete Physical Examination

Likewise at such times, when it is possible to do so, a complete physical examination should be done. Not only must the patient's condition be evaluated from the standpoint of an injured arm, perhaps, but a complete physical examination should be made. Does the patient have blood in his urine? Is there albumin or sugar present? Does he have internal injuries? Is there dullness on percussion of the chest, are the pupils equal, and especially, does he have other fractures?

Compound Fractures

The early treatment of compound fractures accounts for a most important part of what is considered a real surgical emergency. Here one has to consider not only shock, hemorrhage and more severe injury perhaps to the soft parts, but to take into account a wound. Clothing should be removed from the fractured site, sterile bandages secured over the wounds and splints applied before the movement or transportation for any distance is attempted. The Keller-Blake and Thomas-Murray splints are mentioned prominently in the literature because of the ease of application. The former differs from the Thomas splint in that it has but a half padded ring with a leather strap to complete the circumference of the thigh. It can be applied or slipped beneath the thigh and fitted against the ischial tuberosity with little discomfort. While a steady traction is being made, a hitch can be thrown over the shoe or padded ankle and secured to the notched end and supporting pieces of canvas, muslin or bandage may support the mid-thigh, knee and calf. The Thomas-Murray splint differs from the old Thomas splint by being hinged and applicable to either extremity. Traction may be made to extremities in the same manner by a broom or notched board by using a heavy cloth in the axilla or groin as countertraction. As important as splints is the care of the wound, for wounds are considered as contaminated from four to eight hours after infliction, and infected after twelve hours.

Modern methods of treatment in compound injuries consist in the following:

1. Shaving and scrupulously cleansing the parts about the wound with green soap and water and applying a strong antiseptic solution.
2. Cleansing the wound by sterile water or saline solution, removal of foreign bodies, scraping of the contaminated bond ends.
3. Débridement.
4. Repair of tendons and nerves, securing of hemostasis.
5. Insertion of wires, screws, plates, in selected cases, and,
6. Closure of the wound.

Sulfanilamide, 15-20 grams, has been recently advocated in compound fractures, for its effect on the contaminating organisms.

I mention these because all too frequently the outcome in the case depends upon the first person handling the case.

Not all fractures can be simply and easily reduced, even when seen early. Accepted, time honored traction devices, whether pins or moleskin, must be used. A case treated early by splinted traction usually recovers more quickly, but there are notably, in all hands, some cases which have an open operation of the head of the radius, separated fracture for the best of function. These are fracture of the olecranon, and patella, supracondylar fracture: fracture of the neck of the femur.

Finally, the compound cases are out and out surgical entities which demand immediate surgical intervention, to prevent such complications as nerve dysfunction, loss of tendons, osteomyelitis, tetanus and gas bacillus infections, and loss of either limb or life.

In the Natchez Charity Hospital for the last six months, we have handled 63 fractures, classified as follows:

Skull	3
Vertebrae	3
Ribs	1
Humerus	11
Radius	12
Ulnae	2
Radius and Ulnae	2
Pelvis	2
Femur	5
Tibia and Fibula	6
Tibia	4
Fibula	4
Patella	1
Phalanges, Metacarpals and Carpals	7

Of these:

7 were compound
8 were reduced by traction (moleskin)
5 were reduced by pins
1 open reduction.
—
21 and 42 were treated by primary splinting.

1. No. 1144. James B., 18 years. Fractured right ankle. Came in hobbling on right foot with x-ray request of same.

2. No. 1107. Christene Evans, 5 years, left arm, fractured 6 days ago. Comminuted and impacted radius.

3. No. 1095. B. D. M., white male, age 42. Fracture 2 months prior. Seen by private physician in city where all facilities present for treatment. Head pulled over to drooping right shoulder. Fracture-dislocation, cervical vertebrae.

4. No. 1180. Fred C., white male, age 13. Seen by no doctor prior to admission one week after injury to left shoulder. Comminuted fracture of left humerus.

5. No. 1083. Alena B., col. F., age 63. Sustained fall from ladder 2 weeks prior to admission. Unable to walk during this time because of pain and swelling. Comminuted fracture left tibia. Circular cast—position good.

6. No. 934. Nancy H., col. F., age 53 yrs. Comminuted fracture. Positive Wassermann. Left tibia reduced under anaesthesia on Hawley table. Good results.

7. No. 1088. P. J. H., col. male, age 46. Comminuted fracture, head of right fibula. Plaster splint. Admitted to hospital with diabetes.

8. No. 965. Robert C., col. male, age 30. Lacerations and fracture sustained in fight with razor. Distal end of finger held by loose pedicle. Sulfanilamide powder used before suturing and tongue depressor splint. Good results.

9. No. 978. William C., age 31, weight 220 lbs. 2:10—Kirschner wire traction through calcaneus: 3:27—Pin through tibial tuberosity and malleoli. Kirschner wire removed. Cast over pins with walking irons. Doing well.

10. No. 1135. Sam O., white male, age ——. Fracture of patella in auto accident. Separation of fragments. Open reduction. Kangaroo tendon.

11. No. 1079. Odessa P., white female, age 9. Impacted fracture of left humerus. Arm immobilized with Velpean bandage for one month.

12. No. 1121. B. S., white male, age 9. Supracondylar fracture reduced easily because he was seen immediately following accident.

BIBLIOGRAPHY

1. Key and Conwell: Fractures, Dislocations and Sprains. C. V. Mosby Company. 1934.

2. Cohn. Isidore: Resume of Some Personal Experiences in Fractures. 1933. Texas State J. Med. 29: 508-514.

3. American College of Surgeons. An Outline of the Treatment of Fractures. 1940. American College of Surgeons, Chicago.

4. Caldwell. G. A.: Management of Compound Fractures. South. M. J., 1938. 31:746.

5. Kennedy. R. H.: Transportation of Early Long Bone Fractures. Surg., Gynec. & Obst., 1934, 58:479.

6. Palmer. E. P.: Emergency Treatment of Fractures Southwestern Med., 1936. November.

Spinal Injuries*

Gilbert C. Anderson, M.D.
Department of Surgery, Louisiana State University School of Medicine,
New Orleans, Louisiana

THE ACCIDENT TOLL is growing and the road net extending so rapidly that it behooves each of us to be prepared for any emergency to which he may fall heir, and this is especially true of practitioners in small towns or the country who must care for every type of injury with no help from specialists. The subject of head injuries is discussed and reviewed so frequently that everyone must be familiar with the present trend of management, and this is also true, although to a less extent, of such subjects as chest and abdominal injuries, but spinal injuries have received less attention, as has been emphasized editorially in the *Journal* of the *American Medical Association*[1]. It therefore seems pertinent to consider them, and especially their early management, for this particular period is very critical indeed and quite often may determine the fate of the victim. Probably many a cord is irreparably damaged by ignorance and carelessness when the patient is first seen, which naturally is usually by laymen. Instructions for the handling of such patients at the scene of the accident should be posted in all emergency first aid stations[2,3]. The American Red Cross First Aid Textbook covers this matter very completely and concisely.

It seems needless to detail primary precautions to this group, but a few fundamentals may well merit mention. Before being touched, every conscious patient should be asked to move his fingers and toes—if he cannot move his toes, his back may be broken; and even if he can move his fingers and toes, pain in the back or neck immediately places one on guard for fractures or dislocations. The pain is extremely important, as it may be the only symptom or sign. The cord may be simply contused or only partially severed and just in this moment one careless movement may sever a cord. Avoid by all means the common kindly act of raising the head for a drink of water, as such a simple act may completely destroy a relatively intact cord. There must be no movement of the head in any direction. The patient must be handled with extreme care and no jolts and jars, especially in transporting vehicles, are tolerated. Of course, the cord may easily be destroyed if the patient is lifted by the shoulders and legs, allowing the body to sag and flexing the spine. If a fracture is suspected, the patient must be handled very carefully, rolled like a log onto a rigid carrier such as a board, door, or shutter. If the back is broken, he should lie prone, if the neck is broken, supine, but in either case he must be *rolled* and not lifted. Should it be necessary to use a blanket, then it must be grasped and supported near its mid portion by four bearers rather than near the ends in the usual manner.

Those whose necks are broken are usually in a more critical condition—shock is quite common and many die in a short time. Of course, shock must be combatted first, and the methods used are the common procedures for controlling shock. Even in the presence of shock, a hasty survey may be made for certain other injuries such as a ruptured viscus, a punctured lung, or active hemorrhage, which may also be present, but beyond this all other maneuvers such as x-ray, neurological examination, etc., must be deferred until shock is overcome.

The cervical vertebrae are flatter and more saucer-like than lower down and also their processes are less firmly interlocked. Because of their anatomical structure a dislocation without fracture can and often does occur in this region[4], but dislocation without fracture is well nigh impossible below this level.

In this connection, one must keep in mind the fact that a dislocation may be sufficient to sever the cord completely and yet be spontaneously reduced owing to the natural rebound and elastic recoil of the muscles and ligaments. Lateral roentgenograms of these patients may show normal or practically normal alignment.

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*Paper read before the Lauderdale County Medical Society, Meridian, Miss.

The diagnosis of cord injury can generally be made very readily from the history and a quick examination. Fractures without injury to the cord may require careful roentgenological study for demonstration and it cannot be too strongly emphasized that good lateral views are essential, particularly for crushing injuries of the body. One should never exclude such fractures on anterior-posterior views alone, as a compression fracture of the body may appear normal on anterior-posterior views. A clear lateral view of the upper dorsal region is difficult to obtain but fractures are not common there, the spine being so strongly buttressed by the ribs.

The vast majority of fractures occur in the cervical region and about the dorsolumbar junction where they may be well shown on the film. Lesions of the first and second cervicals, particularly of the odontoid process, may be photographed through the open mouth[5].

Cervical fractures are frequently caused by diving into shallow water, and dorsolumbar fractures by hyperflexion, as in weights falling on the back and in overturned automobiles, a common source of such injuries when the patient is "jack-knifed". Fracture due to hyperextension is rare[6].

Localization of the lesion is seldom complicated, as in most cases the pain, kyphos, or roentgenogram will show plainly the level. However, a few general neurological signs may deserve attention.

In high cervical lesions above the fourth segment, there will be paralysis of the diaphragm and, as the intercostals are, of course, paralyzed, respiration is seriously impaired and the accessory muscles are brought into play. Paralysis of the diaphragm is easily demonstrated by asking the patient to push out his belly or by fluoroscopic examination. The pain will be in the occipital and auricular regions. Edema spreading to the medulla may cause many early deaths.

In lower cervical lesions (below segment Four) there are weakness and paralysis and sensory changes, either paraesthesia or anesthesia, and pain in the arms and hands.

In high thoracic lesion (about dorsal segments One and Two) there may be slight pain in the arms and a Horner's syndrome, while in the midthoracic regions the pain is in the intercostal distribution or of a girdle type. In low thoracic lesions the pain is in the abdomen and hips. The pain is a segmental sign and is indicative of the level of the lesion. In this same segmental distribution, any motor paralysis will be flaccid, with reflexes lost. Clinical differentiation between lesions of the conus and cauda equina is extremely difficult except by x-ray or deformity.

Below the segmental level there will be signs of the tract lesions, such as anesthesia, paralysis, first of a flaccid and later of a spastic type, with increased tendon reflexes, the sign of Babinski and its various modifications—sustained clonus, sphincter disturbance, and loss of potentia coeundi. In some cases priaprism may be present and may prove very resistant to treatment.

The injury to the cord varies widely. There may be a simple concussion, with a temporary suspension of functions, which goes rappidly on to complete recovery, or there may be a contusion, with resulting softening, going on to a complete transverse myelitis syndrome which will be permanent, and, of course, there may be partial or complete instantaneous destruction of the cord by the shearing or grinding action of the vertebrae.

There may be a slowly developing edema or, more rarely, hemorrhage, which if unchecked will result in softening of the cord and permanent damage. Such a sequence is rare but must be kept in mind as it demands prompt surgery.

One must ascertain just as promptly and as definitely as possible the manner of onset of paralysis. The paralysis is the oustanding factor and is the one thing noticed by the patient, much more quickly than anesthesia. Sphincter dysfunction and pain may be late in appearing. If the paralysis occurs immediately, then the cord is probably damaged, but if, on the other hand, the paralysis develops slowly, then there may be edema or hemorrhage which can be relieved by laminectomy, and there should be no delay in operating. A cord under compression is an emergency, as every hour counts, and a spinal puncture at this time, with a Queckenstedt test will be helpful. Coleman[7] has repeatedly emphasized the value of the Queckenstedt test as an indication of cord compression. A cord under compression is, in general, the sole indication for operation. Sometimes one may postulate such compression from a bone fragment seen in the roentgenograms. Occasionally, a puncture wound may require operation for removal of a foreign body or disinfection. If by chance an earlier puncture has shown normal hydrodynamics and later there is a subarachnoid block, the diagnosis is well nigh certain. As the prognosis in cord injury is so poor, one feels justified in giving the patient the benefit of exploration in any case of doubt. However, the cases requiring operation are relatively few and the results are frequently disappointing. Indeed, a high degree of hardihood is often necessary to resist the insistence of frantic relatives and friends that an operation be done. This is emphasized by Stookey[2], who says that laminectomy is not justified except in most unusual circumstances.

Operation is indicated in cases in which pressure may be removed from the cord, whether the pressure be due to foreign body edema or hemorrhage, but certainly no operation is indicated for any attempt at cord suture or repair.

Treatment aims to relieve cord compression and reduce the fracture or dislocation. In the cervical region this may be radical or conservative. The dislocation may be reduced by the radical method of extension and manual manipulation, with or without anesthesia, as described by Taylor[8], or by the conservative method which makes use of weights and pulleys. These may be attached by the old-fashion halter arrangement, or, far better, by using tongs such as those designed by Crutchfield[9] and others[10].

In the dorsolumbar fractures, over-correction is obtained by the Bradford frame or some similar appliance and is maintained by a plaster jacket and later by a back brace.

The gravest complication is sepsis, first, from the urinary tract and, second, from pressure sores. There is a retention of urine, and a cystitis is almost inevitable sooner or later with repeated catheterization, an in dwelling catheter, or even if the bladder is allowed to overflow. The infection may spread, first causing a pyelitis and then a true nephritis. This complication, which is often fatal, can frequently be avoided by Munro tidal drainage[11], which should be used. Very careful nursing, with meticulous care of the skin and frequent change of position, may avoid pressure sores.

Provided these complications can be avoided, a person with a complete cord lesion in the lower dorsal region may lead a reasonably happy, comfortable and useful life in a wheel chair. Dry diet and an enema every day or two will solve the problem of defecation, and incontinent or automatic bladder can be managed with an appropriate bag. The hands and brain are as free and capable as ever before, and many people confined to wheel chairs are economically independent.

In those who receive high cervical injury, the picture is entirely different, as there is quadriplegia, with complete helplessness, and these unfortunate sufferers usually have merciful short lives.

BIBLIOGRAPHY

1. Editorial. Concussion of the Spinal Cord, J.A.M.A. 106:924-925, March 14, 1936.
2. Stookey, Byron. Management of Fracture Dislocations of the Vertebrae Associated with Spinal Cord Injuries, Gynec. & Obst., 64:407-419, (Feb. No. 2A), 1937.
3. Brooks, Theodore Prewitt. Fracture and Dislocations of Cervical Spine; First Aid and TransPortation, J.A.M.A., 109:6-10, July 3, 1937.
4. Berkheiser, E. J., and Seidler, Ferdinand. Nontraumatic Dislocation of the Atlanto-axial Joint, J.A.M.A., 96:517-523, February 14, 1931.
5. Kahn, Edgar and Yglesias, Luis. Progressive Atanto-axial Dislocation. J.A.M.A. 105:348-352, August 3, 1935.
6. Wilmoth, Clifford Lee, Fractures of Lumbar Vertebrae due to Hyperextension and Extreme Muscular Action. J.A.M.A. 91:6-8, July 7, 1928.
7. Coleman, C. C., Determination of Local Compression as Indication for Laminectomy in Acute Injury of the Spinal Cord, J.A.M.A., 85:1106-1110, October 10, 1925.
8. Taylor, A. S. Fracture-Dislocation of Neck. Arch. Neurol. & Psychiat., 12:625-639, Dec., 1924.
9. Crutchfield, W. G. Treatment of Injuries of Cervical Spine, J. Bone & Joint Surg., 20, 696-704, July, 1938.
10. Coleman, C. C. "The Spinal Cord," Chapter LXXVI,page 1466, *Operative Surgery*, J. S. Horseley and I. Bigger, 5th ed., Volume 2, The C. V. Mosby Co., 1940, St. Louis.
11. Munro, Donald, and Hahn, J. Tidal Drainage of Urinary Bladder, Preliminary Report of This Method of Treatment as Applied to Cord Bladders," with Description of Apparatus, New England J. Med., 212:229-239, Feb., 1939.

Further Studies of Membranous Absorption*

JAMES H. LIPSEY
BROOKHAVEN, MISS.

THE ORIGINAL work upon this subject began in October, 1929. A preliminary report was read before the Tennessee Eye, Ear, Nose and Throat Society two years later. Further studies have been made with some improvement in methods and a larger group of subjects. With the advent of powerful new drugs a small study has been made using these drugs in experiments on dogs. These have been used to a limited degree on human beings. A short report will be made on this work and the additional work reported by personal communication from other physicians.

First, we have sought light upon the rapidity of absorption into the blood when certain drugs come in contact with the membranes of the nose, sinuses, and throat. The drug chosen for the original experiments was phenolsulphonphthalein. This was used because when absorbed into the blood it is rapidly excreted from a normal kidney, and is recoverable in the urine in easily estimated quantity. This is due to the fact that color calibration with known control colors gives easily determined percentage of drug elimination. It is commonly used as a kidney function test. When used in such a manner it is injected into the vein, and recovered from the urine. Our purpose has been to place it in contact with the mucosa of the nose or of the sinuses, and determine the rapidity of absorption and excretion in healthy membranes and a variety of diseased conditions. All work in which the drug phenolsulphonphthalein has been used has been done on human patients. Most of the work in which the new drugs were used was done on dogs.

The severe toxemia of acute purulent sinusitis has been observed by all of us. It is manifest in the local symptoms of discomfort and the nervous condition of the patient. Almost all will show profuse axillary perspiration and other recognized signs of toxemia. What is a mystery to many of us is the fact that we frequently see a terribly foul pus irrigated from a sinus that has produced no symptoms of illness, nor any discomfort. Usually these are the cases that have had influenza many years before, and had prolonged periods of recovery. They may also be foul residues left after extraction of upper teeth, and temporary fistula formation. After recovery from influenza, or after healing of the fistula, the patient has felt that a cure was accomplished. These cases, and the acute cases, led the writer to believe that valuable information might be obtained from serious study of the absorptive ability of many pathological membranes and normal controls. Allergic individuals were tested, as well as the membranes of various other pathological conditions.

Patients were grouped in the following manner. Six divisions were made, as follows:

1) Controls with normal nasal and sinus mucosa; 2) cases of purulent sinusitis having symptoms of sinusitis; 3) symptomless cases of purulent sinusitis—so-called cold abscesses; 4) allergic membranes; 5) cases of swimming pool rhinitis; 6) atrophic rhinitis.

In this study, all cases of purulent sinusitis had cultures made from irrigated washings. All cases of quiescent abscesses were cultured. Positive cultures of virulent organisms were obtained from all so-called cold or quiescent abscesses.

The first tests made were for the purpose of determining the irritative qualities of the drug. They were made also with dilute solutions. Later tests were made with saturated solutions of phenolsulphonphthalein and no irritation was produced.

Under the first group normal nasal mucosa was tested. Then normal sinuses were irrigated and their openings plugged. The drug was then instilled. Urine specimens were taken at quarter-hour intervals. It was definitely determined that complete absorption occurred from nasal and sinus mucosa in about the same period of time. The time for beginning appearance of the drug in the urine was approximately thirty minutes. The time of complete absorption of a fixed amount of the solution was approximately eight hours. The amount of the drug used was four cubic centimeters, or four ampoules of the standard preparation. After the determination of the normal time of absorption in normal mucosa it was deemed advisable to begin studies on pathological conditions.

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*Read before the Eye, Ear, Nose and Throat section, Mississippi State Medical Society, Gulfport, May 13, 1941.

A word of explanation is here given. In the work done in early years we made a practice of irrigating purulent residue from the sinus before placing the drug in the cavity. Later it was thought best to displace only a sufficient amount from the sinus to accomodate the drug. In this way we could determine whether the presence of pus caused a prolonged absorption time. Our observation has been that absorption proceeds with the same celerity when pus is mixed with the irrigating substance. The chief difficulty is that the natural opening must be blocked.

Under the second group, cases of acute purulent sinusitis. with symptoms. we found that absorption is complete within twelve hours. This is a delay of only a few hours over normal absorption time. It may be noted that a pus-filled cavity completely absorbs its contents in twelve hours. Therefore it is easy to understand the severe toxemia that is exhibited by cases of acute purulent sinusitis.

The third group, quiescent abscessed sinuses, present the most interesting study. These were patients with foul pus. They had no symptoms. Their discovery was accidental, or experimental. They were not neurasthenic handkerchief inspectors. Their symptoms were not related to the nose. Therefore it was deemed especially important that an estimation of the amount of absorption from these cavities be made. It was thought that in some instances we might find that nature had walled off these membranes and possibly they were less harmful to the patient than the odor would indicate. We have found that in all cases studied absorption is under way within one hour and is complete in twelve to fourteen hours. It is rational to assume that toxic material is absorbed in approximately the same time as the drug. It is well to note that this absorption time is approximately the same as that from normal membranes.

The fourth group of individuals studied consisted of thirty-four patients. These were all highly allergic, and tests were made at the season of the year when their noses showed greatest irritability. Because of this we found it difficult to instill the drug into the sinuses. Where use of adrenalin or ephedrine was necessary we noted a delay in absorption and most of the instilled drug was lost due to our inability to lock it up completely within the sinus. In this group we found that only sixty-five per cent of dye was ever recovered from the urine. The time required for absorption was approximately twice as long as that of purulent sinusitis. Naturally a great deal of the dye was lost due to the constant drainage of fluid from the nose. Therefore we conclude that absorption in this group is delayed because of nature's effort to rid it of substances which are highly irritating.

In the fifth group we put together a series of patients who do not suffer from any disease classified in textbooks of rhinology. We have found them to be a distinct group because of two facts. They do not respond to the usual treatment of acute rhinitis. They have profuse nasal discharge similar to that from an acute hayfever. These patients may be classified as having swimming pool rhinitis. Although they may abstain from swimming for weeks, the symptoms continue and are abated only by the passage of time. The tests and results for absorption in these cases differ so little from results obtained in allergic rhinitis that we are led to believe that there is a water-carried allergin combined with an infectious agent. It would seem that the infecting organism entered into this condition as a secondary invader.

The last group consists of a large number of individuals suffering from atrophic rhinitis, or ozena. Tests made upon this group were first done by placing tampons in the nostrils. It was thought best to do this because the absorptive area was greatly decreased. Due to the small turbinates and the viscosity of the secretion in the nose, removal of scabs preceded tamponage. In this group of patients absorption was delayed approximately one hour as related to first appearance in the urine, but there was very slight delay noticed after absorption was under way. It is our belief that this is due simply to the fact that it was necessary for the membranes to dilute a more tenacious secretion before absorption was accomplished. Injection of the sinuses of these patients showed no delay in absorption. By this finding we might be led to believe that atrophic rhinitis is confined exclusively to membranes of the nose. The above observation, however, is contrary to what we have noted concerning membranes of the sinuses of patients suffering from atrophic rhinitis. It has been observed that where the nasal mucosa was atrophic the same condition was apparent to some extent within the sinuses.

In concluding observations concerning the groups of all types in which the drug phenolsulphonphthalein was used, we can say that nasal and sinus mucosa is a highly absorptive area.

For several years the profession has been afflicted with a deluge of new drugs. The information and misinformation concerning their use and benefits has been enormous. Therefore it is with great timidity that I discuss them. What work that we have done is being done by many others. It seems that the greatest present need is to accumulate the observations of a large number of specialists, to rule out the enthusiasts, and view the problem from mass opinion.

In the study of new drugs we were not primarily interested in the confused clinical reports of therapeutic value. We are well aware that they are of value in many instances. Reports of opinions of various specialists will be later recorded. What is desired is at least an opinion as to whether results obtained are from local germicidal properties, or from systemic absorption. As yet we are unable to produce sufficient evidence to prove either opinion. On one side we have the spectacular report of Cosgrave presented at Little Rock befor the Eye, Ear, Nose and Throat Section of the Arkansas State Medical Society. This report was read in April of this year. From his paper we would be lead to believe that the use of sulfanilamide as a local application to the eye is specific for trachoma. Fred Loe, of the United States Public Health Service, has made a very conclusive study of this subject and does not agree with the findings of Cosgrave. His conclusions are essentially as follows. He has no faith in local applications of the drug. He is very positive in his belief in treatment by mouth. It must be administered over a period of time sufficient to cover the incubation period of the virus. He observed that cures were obtained in all instances after treatment for seven days. There were no recurrences. Re-infection was accomplished by implantation of virus on old cases in spite of cure by sulfanilamide. He suggests that all untreated cases, regardless of age of infection, be treated with sulfanilamide due to the possibility of transmission of infection from old cases to youngsters. Again we come back to the conclusion that as yet we have shown no local antiseptic action in this particular condition. The unfortunate thing is that so many diseases have natural periods of retrogression, and so many infections are self limited as to their activity. We are thus prone to false conclusions.

Good results are claimed in local treatment of peritonitis. If this is shown to be true we will know that there is a local or surface germicidal effect. In an article published in the JOURNAL OF SURGERY, GYNECOLOGY, AND OBSTETRICS, of April 1941, the authors Thompson, Brabson, and Walker present a large series of cases. These were studies made on peritonitis following acute appendicitis. It is a complete and well documented study. The conclusions seem to prove that the drug has great antiseptic power when locally applied. Although the article makes a fine clinical study there is no evidence showing actual proof of local germicidal action. It has not been shown that a similar dosage by mouth would have produced the same result. The peritoneum is an absorptive area.

In a personal communication from Dr. R. O. Rychener, of Memphis, I am permitted to quote him as follows: "I have used the saturated solution of sulfanilamide, (.08%), in a number of cases of chronic conjunctivitis. These were cases that had failed to respond to the usual local treatment. No definite organism had been isolated as the causative factor. A fair number of cases seemed to obtain relief. In similar cases I have also used neoprontosil solution, two and one half per cent, and in these I have had an occasional favorable response to treatment. Whether this is due to the psychotherapeutic effect of the coloring matter in the solution I cannot be entirely certain. I believe that it is worthy of trial especially in cases of elderly individuals. In one case where the patient was elderly I used the following treatment. The patient had only one eye. He had bilateral pneumococcic conjunctivitis, epidemic form. In the good eye I used one per cent optochin. In the enucleated socket powdered sulfanilamide was used. Both drugs were used every two hours. The usual silver nitrate applications were used in both eyes. Both eyes healed in seven days with no demonstrable difference. This would apparently show that such infections are in all probability self limited, and the drugs played a very small part in recovery." The above writer has also used ointments of sulfathiazole and sulfanilamide in cases of obstinate blepharo-conjunctivitis of staphylococcal origin. Response to treatment has not been satisfactory. At this time we cannot completely review the literature upon this subject. We simply note that most of the specialists of our acquaintance are using preparations of these drugs, and nearly all are skeptical of local germicidal action. This is not the case when the organism is isolated, and appropriate treatment instituted by mouth. All of us are aware of the benefits thus derived. The information urgently needed at the present time is this: First, do these drugs have any local antiseptic power? Secondly, do they possess any dangerous irritative or congestive properties?

There seems to be a great difference of opinion at the present time. I have also found divergent opinions as to the benefit obtained from using the drug in local treatment of nasal and sinus mucosa. In a personal communication from Dr. P. M. Lewis, of Memphis, he says, "I have used the drug locally, only in cases which failed to respond to usual treatment. In other words, repeated irrigation failed to show any appreciable improvement. In 10 or possibly 12 cases of this type, very rapid improvement, followed by complete cure, has resulted from filling the antrum with a 10 per cent emulsion of sulfanilamide, after first irrigating it. About one or two drams of acacia per ounce was added to the emulsion in order to hold the sulfanilamide better. "

In the short space of time that we have been working on this subject we are not justified in speaking with great conviction. Several months ago I began a series of experiments on dogs. These were conducted with the sole purpose of ascertaining the local irritative qualities of the drugs, if any such qualities existed. The work was carried out over a period of five weeks. The drugs sulfanilamide, sulfathiazole, and neoprontosil were instilled and injected into the eyes and nostrils of six dogs. Knowing that the drug would pass to the nasal mucosa, we used it in the eyes and nose of only one side. The opposite side was considered a fairly good control. The use of saturated emulsions, not solutions, produced no untoward effect in any instance save neoprontosil. There was moderate irritation in both eyes and noses of the animals on whom this drug was used. The irritation did not persist more than forty-eight hours after the drug was discontinued. After a period of two months we have found no latent harmful effect.

Since these experiments, or tests for irritability, we have used the drug in a wide variety of conditions. We are testing its value particularly in maxillary sinusitis. We have a large series of cases of purulent residue in maxillary sinuses where an ample window is present. It has been our custom in years past to do radical surgery on many of such cases. The results obtained have been most unfavorable, and this was not due to incomplete surgery. You may say what you will, clean the antrum as clean as a billiard ball, scoop out the ethmoids, and possibly clean the frontal sinuses, but still there will remain a large per cent of individuals with no respiratory resistence who will suffer from recurrent attacks of purulent sinus discharge. Many of these have cured with proper vitamin treatment, and general systemic treatment. Others resist our efforts. If a drug can be discovered that will turn the tide in such instances we will have indeed made progress. We must continue to work hopefully. As yet we are unable to report satisfactory results from the drugs above named. More work must be done.

Discussion

Dr. D. C. Montgomery (Greenville): My personal feeling has been that the rate of absorption from the nasal mucosa depends on whether the normal physiology of the membrane is maintained or whether this is reduced by infection or other chemical factors. Therefore an understanding of the physiology of the nasal mucosa is necessary in order to follow out its pathologic reactions.

The membrane is supplied with cavernous blood spaces of erectile tissue. The arterioles are supplied with a muscular layer and from their deep situation, take a corkskrew course toward the surface and the venous sinuses, the latter of which may be of considerable size and so much enlarged in the mucosa when it is the site of inflammatory change, that it is often difficult to judge what is abnormal.

For recent years action of the cilia and movement of the mucus film have received much attention in rhinologic circles. In the sinuses the cilia have the important function of directing flow toward the ostia. The normal presence of mucus and activity of the cilia are great barriers to infection, and when this mechanism is destroyed or deranged infection gains a foothold.

The activity of the secretory mechanism may be observed clinically.

Observation of the normal at intervals will show the appearance and relative position of the membrane within the nose changes. The swelling of the mucosa is seen, later a few drops of moisture increasing in size. and finally a film covering the membrane followed by shrinkage of the membrane and a wider open nostril on that side. The other side may now be seen to begin to swell and go through the same process. The blood spaces in the membrane have filled: the involuntary muscle causes contraction of the blood spaces forcing the blood into the glands and stroma and in turn the contents of the glands are expelled onto the surface. As the activity increases, the secretion increases, until the cycle is completed.

Invasion of the surfaces of the mucosa either with irritants or drugs, infections or injuries, disarranges the normal function and consequently absorption of toxin is favored. Dr. Lipsey shows this. In the normal nasal mucosa which includes sinus membrane, phenolphthalein began to be excreted in 30 minutes and was complete in eight hours. In the acute suppurative sinus with symptoms, excretion by the kidneys began in one hour and was completed in twelve hours. In the old chronic sinuses with latent or cold abscess present, the drug began to be excreted in one hour and was completed in twelve to fourteen hours.

The moderate amount of variation in the time element of absorption between the normal mucosa and the old chronic case of months' or even years' duration is most interesting and is rather difficult to understand as it is nature's habit to try in some way to limit absorption of toxin by throwing out protecting tissue elements or plugging lymphatic channels. In the allergic cases the increase in time of absorption is understood because of the water-logged tissues which have about all the fluid they can carry and time is required for further absorption.

Dr. Jack S. Guyton (Baltimore): Very briefly the little bit that I did with sulfanilamides was as follows: I tried them to see how much they were absorbed into the eye. I found that in the case of the rabbit eye much higher concentration would be obtained in the aqueous solution. It is soluble to approximately 1/10 of 1% in aqueous solution. We tried mainly sulfanilamide because it is more soluble. We found that we could get a smoother preparation in by 47% and by preparing an ointment. In that way we found that we could get absorption in the rabbit's eye. That is a pretty high value when one considers the usual blood level around 10%. From a clinical standpoint our results were a little bit disappointing with sulfanilamide compound, part of them caused by staphylococcus, part by bacteria. In this group of cases we tried using the ointment with sulfanilamide in one eye. In this group of patients the results were approximately the same. or similar.

Dr. Lipsey (closing): I thank these gentlemen for their discussion.

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MISSISSIPPI'S HOSPITAL PLAN

An important question for the doctors of Mississippi and our legislature at the coming session will be that of hospitalization. Mississippi now has a very good hospital service although it has the fewest number of beds per capita of any state in the union. Our state has about one hundred hospitals and they are quite well distributed. It is true that the general funds for the indigent are inadequate and it is also true that many of our hospitals are not as well equipped physically and by staff as they might be. But even so, the people are receiving very good average medical service. Our state has few specialists, but it has many fine practitioners of medicine and general surgeons. We are fairly well balanced in this respect. Hardwood paneling and tile floors do not heal wounds. The time has come when we need to learn to practice medicine in a simpler way and with less equipment.

Our state has a dual system, more or less, in its hospital system. The per capita distribution of funds is the greatest step forward that has been made for carrying medical service to the masses. But fifteen cents per capita is not enough to take care of the indigents of our state. This appropriation serves very well for the very urgent emergencies, but there is much practice that should go to the hospital that can not on account of funds. We have scores of women who should go to the hospital for their confinements, unless we are to have more doctors in the state and have available funds to pay the practitioner to go to their homes. The hospital plan is perhaps the most economical. Our five state-owned charity hospitals should be owned and operated by the counties in which they are located and should share in the per capita distribution as any other, or should be closed and the patients and the funds distributed to the private hospitals. It would be well to have one centrally located hospital as a kind of clearing house for the smaller hospitals. If this hospital should be located at Jackson, the city and Hinds County should be liberal contributors to its support. It would not be necessary to put hundreds of thousands into it. It is not good economy now to construct a building to last a century or two; we are moving too fast. We do not believe the time is propitious for Mississippi to have a medical school, but we should certainly be able to offer internships. A two-hundred-bed hospital at Jackson with our state hospital at Whitfield and our Sanatorium at McGee could offer a fine internship. Six months of the two years should be spent out in the small hospitals of twenty-five to fifty beds. We should complete our system, and above all we should have at least five to ten cents added to the per capita appropriation. Every hospital participating in the funds should be an open institution and there should be no zoning.

THE AGED

Financial security for the aged is a noble effort on the part of our government. But retiring a man from work, putting him on the shelf, and counting him as worthless at sixty is about as wise as destroying the sows and pigs while a third of our population needed food. The failure to utilize the knowledge and the wisdom and the dependability of the man past sixty is like building a barn and leaving off the cover, like keeping a flock of sheep and letting them shed the wool, like keeping meal in the barrel while we hunger for bread. The man past sixty-five may not be able to take as many steps down the road of economy as the younger one, but he usually knows how to make them count for more. The happy old man is the one who continues to do something. Now that deaths and births are about equal, his work is needed more than ever.

The medical profession has its responsibility to the aged. A study of the aged has been sadly neglected as a specialty. Pediatrics, the child on the Atlantic Ocean of life, has wrought wonders, but geriatrics, the man on the Pacific, has received but little at the hands of the medical profession. Abraham Jacobi, the father of pediatrics, was in active practice at 90 years of age; John D. Rockefeller, the great financier, missed his full century by only two years, and Mississippi doctors can attest how active Rudolph Matas is at more than fourscore years.

If a man keeps mentally and physically fit he should be worth more to human society every day that he lives even though he lives to be a hundred years. We are advancing in agriculture, which is good, but we need advancement in gericulture. Geriatrics is as much a specialty as pediatrics. The medical professon can do much to conserve the wealth we have in the aged and add much in happiness. We have been too prone to charge ills to age and let them go at that. It is up to the doctors in Mississippi to take an interest in the aged, since nearly fifty per cent of the state's doctors now have reached sixty years.

With unity of effort the United States will not be invaded any time soon. Internal weakness is our greatest danger. If we are to have socialized medicine in a pernicious form it will be due largely to the medical profession itself. We should ever be on guard to do our full duty to the people and especially at this time. Many calls and many types of cases we would prefer not to make or not to take, challenge us to our patriotic duty. Every doctor left at home must do his full duty to the people and be fair with his fellow doctor. Every doctor should be willing to do his part of the undesirable practice, his part of the charity, and never should he high pressure a patient for an unreasonable fee, nor should he charge fees that are too low for the good of the profession and the people. In this crisis the medical profession should cement itself into a fellowship to save not only the democratic way in medicine, but to show the way in government.

We have many medical societies whose purpose it is to disseminate scientific medical information. A large percentage of them are doing a fine job of it. We may have too many medical societies but, let this be as it may, every practising physician should belong to his local, state, and national organizations. Within these societies we must meet our medical problems and deal with them accordingly. However important medical ethics and medical economics are to the profession, the delivery of the best service possible to the people is of the greatest importance. Organized medicine needs every doctor and every doctor needs organized medicine. Now is the best time to pay society dues. The average doctor in Mississippi has a little more money at this time of the year. It is a good time to pay dues for all memberships, but especially to the county and state societies. We have a number of doctors in our state who belong to neither their county nor their state organization. They are on the receiving end of the line, but not on the giving end. Every county should make an effort to secure one hundred per cent membership. President-elect Lowry Rush, whose special duty it is to remind you of your membership dues, will be pleased to have reports of hundred per cent membership from every county possible. Your councilor would be very happy also, and President Gus Street would rejoice exceedingly at a hundred per cent membership for the state. Pay your dues now.

In Memoriam

Born June 1886

Died November 1940

C

QUITMAN UNDERWOOD NEWELL

President-Elect of the Southern Medical Association 1940

The doctors of the South, with many guests from other parts of the nation, are happy to meet again in St. Louis for the annual session of the Southern Medical Association. Beneath their anticipation for the meeting in this ideal convention city is a vein of sincere sadness in the heart of each whose great fortune it was to know Dr. Quitman Underwood Newell. Had he lived it would have been the supreme satisfaction of his life to have presided in his own city over this great association as its president. He would have utilized all the energies of his dynamic personality for the pleasure and profit of every member and every guest who came.

Dr. Newell's life was filled with romance, from his early boyhood in a small country town in Alabama up through vicissitudes and successes to an important practice and a chair in a great university. The medical profession of the nation admired and respected him and profited by the thoroughness of his specialty. His knowledge of surgery and obstetrics was applied with such divinely endowed skill he saved life where others might have failed. His own zest for living inspired hope and the desire to live. His ready wit, kindliness, fair and generous mind made him the idol of every group.

His well-balanced faculties, his joy in service, and his progressive citizenship fitted him well into this city associated with his greatest work. A teacher of peculiar ability, a man who never lost the common touch, Quitman Newell lives yet in the hearts of those whose lives he blessed, and lends yet a guiding hand to this, the Southern Medical Association.

On the third and fourth of November the Mississippi Nurses Association held its annual session at the Robert E. Lee Hotel in Jackson, with a registration of about four hundred and fifty. Mrs. Julie S. Blue, of Meridian, presided as president and was reelected for another year. About three hundred were present for the annual banquet, an attendance that is a little better than the doctors average at their state meeting.

The Nurses Association was organized at Natchez, June 7, 1911, with 29 members. Miss Jennie Quinn, of Hattiesburg, was the first president, and Miss Leola Steele, the secretary. A bill requiring nurses to register was passed on March 11, 1913. The enrollment at the meeting this year shows a fine growth of the association. Miss Ozella Thomas, of Booneville, was the only charter member present at the banquet on Tuesday night. She received her training at the Street Hospital in Vicksburg and has been a faithful attendant at the meetings of the association during the entire thirty years. As a private nurse she is able and resourceful and has ever held the ideals of the profession.

The nursing profession is the right hand of the medical fraternity. Each one needs the other. With a shortage of doctors, nurses are in greater demand than they have ever been. Every doctor in the state should have a trained nurse in his office for his own good and for the better service to his clientele. Medicine must be served more promptly and in more palatable form, which makes opportunities in the field of nursing bigger and broader than ever before. More power to this noble profession.

Saint Louis is the home of The C. V. Mosby Company. Its booth will be a popular place for the doctors attending the Southern next week. *The Care of the Aged,* third edition, by Thewlis, is one of the most interesting books published by this company recently.

PAUL HENRY RINGER

PRESIDENT OF THE SOUTHERN MEDICAL ASSOCIATION

A man of many gifts is Dr. Paul H. Ringer, a linguist and a musician, as well as one of the most scholarly members of the medical profession.

He was born in New York City, November 6, 1881, the only child of Severin and Elisa Minot Ringer. His father, a Pole by birth, was Professor of Modern Languages at Lehigh University. His mother was a Belgian, and an accomplished musician. Dr. Ringer attended private schools in New York, received his A.B. from Columbia University in 1901, and his M.D. in 1904. He served internships in Bethlehem, Pennsylvania, and New York City, and came to Asheville, North Carolina, to begin practice in 1906. He was associated with the late Dr. Charles L. Minor, and specialized early in diseases of the chest. His years of practice have covered the period of prominence of Asheville in the field of tuberculosis; and he himself has achieved prominence for his work particularly in this disease.

In 1915, Dr. Ringer married Miss Eleanor Varick Morrison, of Asheville. They have two children, Paul, Jr., a graduate of Princeton and now a student at the Vanderbilt University Medical School, and Eleanor, who is at Sweet Briar College.

In the World War Dr. Ringer served as captain in the Medical Corps of the United States, attached to the Italian Army at Base Hospital 102 in Vicenza, Italy. He has had many medical and civil honors, including the presidency of his state medical association and of leading organizations for the study and prevention of tuberculosis.

He has been president of the Southern Tuberculosis Conference, has held office in several of the special societies, and is a diplomate of the American Board of Internal Medicine.

In 1913, he joined the Southern Medical Association and since then has attended twenty of its meetings. In 1928, he was General Chairman of the Asheville meeting of the Southern Medical Association and for six years represented North Carolina on the Council of the Association.

To a rare degree he combines the qualities of scholarship, ability as an internist and diagnostician, leadership and forceful speaking. Few men have reached the presidency of the Southern Medical Association so well equipped for the office and with such widespread approval of his associates as has Dr. Ringer.—*Southern Medical Journal*

MARCUS PINSON NEAL

PRESIDENT-ELECT OF THE SOUTHERN MEDICAL ASSOCIATION

Pathology, the most fundamental of the sciences, is perhaps the product of an older medical culture; it certainly does not go with the era of the horse and buggy doctor. As a speciality in the South it is not much more than eighteen years old, since only the last two decades have required widespread installation of paid pathologists in staffs of hospitals of repute.

The president-elect of the Southern Medical Association is the first pathologist who has held this office. He is an Alabamian by birth. He was born in Heflin, in 1887, near the Georgia border. His mother was Ella Jane Pinson Neal. His father, William Alexander Neal, was practicing medicine in Heflin at the time of Pinson's birth.

After attending the University of Alabama Dr. Neal later was graduated from the University College of Medicine, now the Medical College of Virginia, in Richmond, in 1912. From that time until America entered the World War, he held various positions in clinical pathology and bacteriology in his alma mater in Richmond; in Asheville, North Carolina; in Chicago in the Board of Health Laboratories, and in Northwestern University Medical School.

In 1917, he married Mathilde Frances Evers, of New York City, and they have a son, Marcus Pinson, Jr.

He accepted the chair of pathology in the University of Missouri School of Medicine in 1922, where he has remained to the present time.

In 1926, he joined the Southern Medical Association and has missed few meetings since that time. He has been secretary, vice-chairman and chairman of its Section on Pathology, chairman of its Section on Medical Education and Hospital Training, and Councilor from Missouri for a number of years, chairman of the Council in 1935-1936, and has done much to interest physicians in his state in the Association. Also he has been active in a number of other medical organizations and movements.

He has been president of the Mississippi Valley Medical Society, and was the recipient of its distinguished service award in 1940. This was given in recognition of "splendid teaching, conscientious and valuable research, together with sterling character."

Above the average as a speaker, he is also well informed and studious. His energy is unbounded and uncontrollable, and sooner or later he is found taking over most of the work of almost any committee upon which he serves. He is a Democrat, a Presbyterian, a thirty-second degree Mason and an enthusiastic hunter and fisherman.

The Southern Medical Association is perhaps entering upon a difficult year, but is blessed with superb leadership. It is fortunate to have Dr. Neal's standards of scientific and civic work as a light before it, and as a further guarantee of a successful and progressive year in 1942.

News and Comments

It is with the deepest regret that we learn of the unfortunate accident of Mrs. G. S. Bryan, who suffered a fractured hip. Mrs. Bryan is in the Campbell Clinic at Memphis and we are wishing for her a complete and a speedy recovery. Our sympathy goes out to Dr. Bryan also, whose editorial will be missed in this issue of the journal.

Winthrop Chemical Company, Inc., announces the removal of the Professional Service Office to Hibernia Bank Building, New Orleans, Louisiana.

HOSPITAL FOR SALE: at Big Timber, Montana; ten rooms, furnished, equipped for surgery. Building entirely modern with hardwood floors and concrete basement. Hospital can be used for living quarters and office by resident surgeon, if desired.

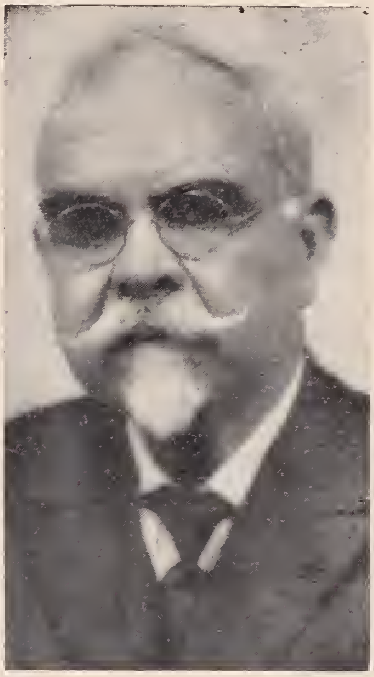
The city is located in the center of a rich farming and stock-raising region with nearby "dude" ranches and some of the finest hunting and fishing in the West.

Physicians of this community during the past thirty-five years have had paying practices far above the average. This hospital was built by one of them in response to a real need. His death and that of another surgeon makes this opportunity available.

For further particulars write to the executrix, Mrs. A. F. Rice, 814 West Park Street, Butte, Montana.

In January, 1941, the Civil Service Commission announced an examination (Announcement No. 38) to secure Public Health Nurses, ($2000 per year) and Graduate Nurses, General Staff Duty ($1,800 a year) for the Government service. A revised edition of the examination has just been issued in which for Graduate Nurse, General Staff Duty, the time limit for graduation from a school of nursing has been increased to fifteen years. In the original announcement, graduation within the past twelve years was required. Announcements No. 38, 88 and 103 have also been amended to allow over-age applicants and those who cannot meet the physical requirements to apply for these examinations. Persons who have been rated eligible under Announcement No. 38 issued in January, 1941, need not file new applications under Announcements No. 38-Revised. Applicants for the positions of Public Health Nurse may be filed until further public notice. Applicants will not be given a written test but will be rated on their education and experience. Application forms may be obtained at any first- or second-class post office or from the Civil Service Commission, Washington, D. C.

DR. RUDOLPH MATAS GIVEN LOVING CUP IN RECOGNITION OF CAREER OF BENEVOLENCE



Dr. Rudolph Matas, physician, surgeon and teacher of New Orleans, was presented The Times-Picayune Loving Cup for 1940 in a ceremony at Tulane October 25. The presentation was made by L. K. Nicholson, president of the Times-Picayune and New Orleans States "in recognition of his years of unselfish service to his fellow man." Dr. Maxwell E. Lapham, dean of Tulane School of Medicine, presided.

In his speech of acceptance, Dr. Matas referred to the history of sanitation in New Orleans, to the vanquishment of yellow fever in the city and pointed out that no monument yet stands in the city to commemorate the work of the medical scientists who had a part in this.

He further attributed the wonders that science has wrought in the last half century to the conquests of medical science in suppressing yellow fever, malaria, typhoid, cholera, and the other plagues which thwarted the progress of civilization for centuries.

He ended with an acknowledgment of his debt to medicine and to his community and the joys associated with his labors through sixty-one years as an M. D.

"If I have added anything to the value of medical knowledge, if I have accomplished anything that is creditable to my university, to my predecessors, that may be of value to my successors, and if I have been able to render service to the community, it is for me to be grateful for the opportunities that the community has given me to utilize and profit by them for my own betterment and for the common good.

"My cup of gratitude is full, and I must rest to stay all waste from its overflowing effervescence."

MISSISSIPPI SCHOOL FOR THE BLIND

Dr. Benj. J. Marshall, superintendent of Mississippi School for the Blind, was born October 7, 1870 in Carroll County, attended the country schools and old A. & M. College, graduated in medicine at the Medical Department of the University of Tennessee in March 1894, practiced medicine at old Black Hawk in Carroll County until 1909, moved to Eupora and practiced until 1913, went to Mississippi A. & M. College as college physician and resigned in 1917 to enter World War No. 1. Left the army in September 1919 and entered the Public Health service stationed at Houston, Texas. In September 1920 re-entered the army service with a permanent commission. While in the service made a tour in the Philippines, was five years with the National Guard, Oklahoma City, retired from active service from Fort Adams, Newport, R. I., in 1934 under statutory requirements having reached the age limit of sixty-four. Spent two years on the Mississippi Coast. In April, 1936, he joined Dr. Mitchell on the Staff of Mississippi State Hospital and at the end of four years was appointed by Governor Johnson, as Superintendent of the Mississippi School for the Blind on North State Street in Jackson, which position he now holds.

Seventy-eight boys and girls between the ages of six and twenty-one, most of them totally blind, are being trained in the Mississippi School for the Blind, Jackson, Mississippi.

The children are taught the same fundamental educational courses as are normal seeing children, of course, without the use of sight. Their other faculties, especially those of touch, memory and hearing must be developed to the highest degree of efficiency. The teaching of the blind is largely an individual matter, especially is this true in the primary grades. An entire class can not be shown as a group, but each child must be taught through the sense of touch. For this reason a large number of specially trained teachers is necessary, thus making the education of the blind a comparatively expensive process.

In 1847 a blind philanthropist, James Chaplin, of Shannon, Mississippi, established a school for the blind on North Jefferson Street in Jackson, Mississippi. He selected as headmaster, Mr. Paul Lane, who was a graduate of the New York School for the Blind. In 1848 by act of the Legislature the school became a state institution. Mr. Lane was the first superintendent and during his service of many years the attendance was small, but the course of study ambitious. Ancient and modern languages and higher mathematics were among the subjects taught.

Even during the dark days of the Confederacy this school did not close its doors, but because Jackson was the center of large war activities, it was necessary to remove the "Blind Asylum," as the school was then called, to Monticello. Mr. Lane continued his work there and returned to Jackson as superintendent after the close of the War Between the States.

In 1880 Mr. W. C. Johnson bequeathed a large plot of ground on North State Street to the school. In 1881 the first building was erected and the school moved to its present beautiful site. The plant now consists of four buildings.

During the succeeding years eight superintendents have directed the school, the attendance has greatly increased and a more practical course of study and training has been developed.

Dr. Benj. J. Marshall, the present superintendent, vigorously resents the old name, "blind asylum" and insists on the more modern conception, "Mississippi School for the Blind." Dr. Marshall exercises a kindly, but firm care over the scholastic, social and religious life of the pupils and is alert in all matters pertaining to their health and well being. In addition to the principal, Mr. Ferrell Lowery, there are five teachers and two coaches in the literary department, three music teachers and one instructor in piano tuning, one instructor in manual training, a teacher in typing and one instructor in home arts. Besides a dietitian and two matrons a staff of domestics is required.

In the literary department the course of study is similar to that of the Jackson public schools beginning with the primary work continuing through high school.

In the music department, voice, various musical instruments and piano tuning are taught. Also there is a boys' quartette, a boys' sextette, an orchestra, a band, a senior and junior chorus and a rhythm orchestra.

In the manual training department the boys are taught to make mattresses, brooms, mops and to do chair work both in fiber and cord.

In the home arts department the girls are taught knitting, crocheting, embroidering and machine stitching. The girls are also taught to weave, braid, hook and crochet rugs on various kinds of looms and frames. They also do basketry in simple and complex patterns with reed and raffia. The department has an excellently equipped kitchen where the older girls are taught to cook and serve a meal and are given a course in food values.

The school has a small library of about twenty-five hundred volumes. a special set of maps for use in teaching geography and a supply of typewriters for the typing class.

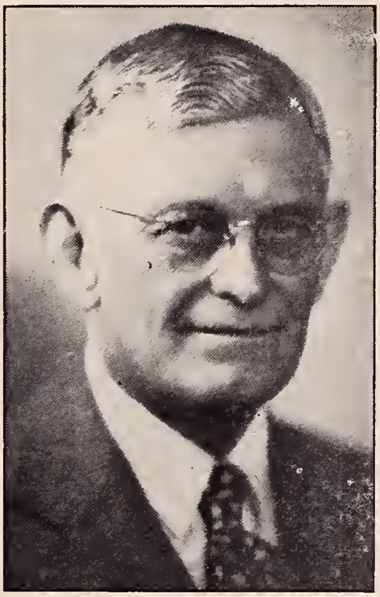
The students are extended many courtesies and the older ones have opportunities to attend musical and literary events in Jackson. All the students are enthusiastic over their annual visit to the State Fair. The high point of their social life is the Christmas celebration made possible by the Jackson Lion's Club. In addition to this celebration, the Lion's Club contributes generously to the blind.

The graduates of the school are admitted to colleges and universities. Also, a large percentage of them have been among the members of the Legislature, teachers, members of orchestras, have compiled books in braille, are proprietors or workmen in mattress and broom factories.

Although modern buildings and equipment are greatly needed the management is making the best use of existing facilities. Board, tuition and books are free to the blind and while pupils do not have sight, many of them do have vision to take advantage of the opportunities provided by the Mississippi School for the Blind.

Deaths

DR. G. A. HENDON, SURGEON, DIES AT AGE OF 70



Dr. Hendon was a man of individuality, deep conviction, and outstanding native ability. We deeply appreciate the interest he manifested in our journal. In March 1937 he came back to the home of his boyhood days, Booneville, and addressed the Northeast Mississippi Thirteen Counties Medical Society on Ephraim McDowell and Jane Crawford. This address was published in the May issue of *The Mississippi Doctor*, *1937*. Dr. Hendon was a great teacher of surgery and was distinguished for his work on fractures and he used the glucose drop method for treating ulcers of the stomach and duodenum. This journal offers its sincere sympathy to Mrs. Hendon Greenville for the following clipping from a Louisand the family. We thank Dr. T. B. Lewis of ville, Ky., paper:

Dr. George Albert Hendon, 70, prominent retired surgeon, died at his home on the Taylorsville Road, Louisvillie, Ky., Oct. 26.

Born in Scott County, Mississippi, June 1, 1871, Dr. Hendon was graduated from the old Louisville Medical School in 1894 as valedictorian of his class. He then became one of the first internes at the City Hospital, winning the post in a competitive examination.

He later served as assistant in surgery at the Hospital College of Medicine, and in 1903, at the age of 32, he was made professor of surgery, which post he held when the College of Medicine became a part of the University of Louisville and until 1933, when he retired and became professor emeritus.

Dr. Hendon was the author of more than 100 scientific papers and was the originator of many new surgical techniques, new methods of enterostomy and technique for repairing certain fractures. He also did much toward developing methods of administering fluids intravenously, including his origination of venoclysis.

Dr. Hendon was one of the founders of the American College of Surgeons and was a former vice-president of the Southern Surgical Association. He also was an American Medical Association fellow and a member of the Kentucky and Mississippi State Medical societies and of the Jefferson County Medical Society. He was a Mason and a member of the Filson Club.

He is survived by his wife, Mrs. Jessie Peters Hendon; two sons, George A. Hendon, Jr.; an attorney, and Dr. James Robert Hendon; a daughter, Mrs. Thomas Rickert, Essex Falls, N. J., and three grandchildren.

Dr. John Willis Conley Bowman died at the King's Daughters Hospital, August 13, 1941. Dr. Bowman was 63 years of age and had been practicing medicine for about 32 years. He began his practice at Perch, on Fair River, going from there to Bogue Chitto. He has been in bad health for the past three years and unable to keep up his practices. He suffered a stroke while up town and was rushed to the hospital where he died about five or six hours later, never regaining consciousness. Surviving are his wife, Mrs. Laura C. Bowman, one son, Clifton, two daughters, Mrs. Clifton Roberts and Miss Mary Nell Bowman.

Dr. C. E. Burnham, 70, one of central Mississippi's most prominent physicians and civic leaders, died at his home at Bay Springs, Miss., September 30, 1941, apparently the victim of a heart attack. He was found dead in bed by a housemaid. Dr. Burnham was born at Harpersville, in Scott County, and received his medical training at Tulane University. He formerly practiced at Moss Point, moving to Bay Springs in 1904, where he had been since. Dr. Burnham was a colonel on Governor Johnson's staff, a former president of the Bay Springs Rotary Club, president of the board of trustees and formerly county health officer. Besides his wife, he is survived by two children, George H. Burnham, Birmingham, and Charles Burnham, medical student at Tulane.

Dr. James J. Wymer died at his summer home in Waveland, Mississippi, August 9, 1941, following a heart attack. Dr. Wymer's home was in New Orleans. Funeral services were held at St. Anthony Church with interment in Hope Mausoleum. Dr. Wymer was especially interested in children, being active in Scout Work and other school organization work. He had maintained a home on the Gulf Coast for nearly twenty years. He is survived by one son, Joseph, J. Jr., and six daughters.

Dr. Robert Bayard Touchstone, 65, native of Simpson County, Miss., died at his home in Lytle, Texas, October 14, 1941, following a heart attack. Dr. Touchstone was widely known in Texas as a physician, banker, capitalist and philanthropist. He was active in church, fraternal and civic organizations, being a Shriner, a Mason, a Lion and a Woodman of the World. Twice he was elected vice-president of the Texas State Medical Association, and at the time of his death was president of the Bank of Lytle. He attended the University of Tennessee. Surviving are his wife, two daughters, Mrs. Milton McDonald and Miss R. B. Touchstone, one brother Sup't. T. N. Touchstone, Amory; two sisters, Mrs. W. M. Owen and Mrs. Sudie Touchstone. Funeral services were held at the Baptist Church at Lytle, Texas.

Book Reviews

THE PREMATURE INFANT, ITS MEDICAL AND NURSING CARE, by Dr. Julius H. Hess and Evelyn C. Lundeen, R.N. Published by J. B. Lippincott Company, Philadelphia. Price $3.50. 304 pp., 74 plates.

Dr. Hess is professor and head of the Department of Pediatrics at the University of Chicago. Miss Lunden is supervisor of Premature Infant Station at Sarah Morris Hospital Chicago. The book is dedicated to The Infants Aid Society of Chicago.

What constitutes a premature infant is described in the first chapter. Its physiological care is discussed in the second chapter. The requirements for nurseries for the full-term and the premature infant are described, while incubators and the immediate care after birth, hemorrhage in the newborn, its cause and treatment, are dealt with expertly and constitute important information. Breast feeding and artificial feeding are given due emphasis.

This book should be on the desk of every doctor and every nurse whose work is dedicated to building greater health values.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY, by Dr. Jerome E. Andes, director of Department of Health and Medical Advisor, University of Arizona, and Dr. A. G. Eaton, Ph.D., Assistant Professor of Physiology, Louisiana State University of Medicine, New Orleans. Published by C. V. Mosby Co., St. Louis. Price $4.00.

Again we see Southern men recognized as authors. This book is composed of 428 pages with 23 illustrations. The subject matter has been well condensed. The first chapter of the book summarizes the chapters to follow in a splendid manner. At the end of many of the chapters the authors add a summary of points in table form. They make it clear that laboratory findings are primarily to supplement clinical findings and should have only this value when employed by competent laboratory workers.

The book is divided into five parts with 23 chapters and an appendix following. Fourteen chapters are given to chemistry of the blood; part two is given to chemistry of the cerebrospinal fluid, part three to chemistry of the urine, part four to functional tests, and part five to gastric analysis and basal metabolism. The appendix shows the preparation of reagents and standard solutions. The entire book is written in an interesting manner and offers valuable and interesting information for every doctor or laboratory worker.

ESSENTIALS OF PHARMACOLOGY AND MATERIA MEDICA FOR NURSES. By Albert J. Gilbert, M.D., and Selma Moody, R.N. Published by The C. V. Mosby Company, St. Louis. Price $2.25. Dr. Gilbert is instructor of pharmacology in Aultman School of Nursing, Canton, Ohio. Miss Moody is instructor in Nursing Arts at the Presbyterian Hospital in city of Chicago. The book is dedicated to Professor W. T. Dawson.

The object of this up-to-date and most interesting little book is to present the facts and theories of pharmacology and materia medica for nurses in a clear, concise form, adapted to the limited time available for the course in many nursing schools. In this book each important drug is discussed as to preparation, dosage, mode of administration, action, uses and untoward effects. The drugs included are practically all approved by recognized authorities. Posology, the system of dosage used by Miss Moody, is a most interesting and helpful chapter. The discussion on the different anesthetics is very helpful to any nurse and to any doctor. The sulfanilamide group come in for liberal space under the specifics. Hormones, vitamins and serums are discussed in a most interesting and helpful manner. The official doses of drugs in the appendix is worth the price.

NECROPSY, published by the C. V. Mosby, Company, St. Louis. Price $1.00.

The importance of necropsy is growing in the minds of the profession and the people are becoming more willing for it to be performed. The average surgeon has not had the training or method for simple procedure in printed form to aid in the past. Dr. Bela Halpert, of New Orleans, is now out with a concise simple necropsy procedure that should be very helpful to any one who is interested in an autopsy. Dr. Halpert is assistant professor of pathology and bacteriology in Louisiana State University School of Medicine. His seventy-five-page book is written as a guide for students of anatomic pathology. The book is based on the principles of the method used by Ghon. It has twenty chapters and an appendix in which a method of assembling and evaluating the data is illustrated by sample necropsy records.

LEPROSY, by Sir Leonard Rogers, K.C.S.I., C.I.E., M.D., F.R.C.O. F.R.C.S., late professor in Calcutta Medical College; and Ernest Muir, C.I.E., M.D., F.R.C.S., Edinburgh. 252 pp., 81 plates. Published by the Williams and Wilkins Company, Baltimore, Md. Price $4.50.

To the man interested in tropical medicine the second edition of Dr. Rogers' and Dr. Muir's *Leprosy* is as replete in information on the subject as may be found in one volume. The authors, long experienced in research on this disease, begin with the history of leprosy. They show by charts its incidence in areas having the greatest rainfall. They take up the various theories that have held sway until the present infective one displaced all former ones, describing the bacillus leprae and its distribution. The clinical phases of the disease and treatment leave one with a hopeful attitude. Despite its rare occurrence in the temperate zones, the authors plea for alertness on the part of physicians and a general improvement of living conditions, sanitation and nutrition in areas where leprosy is found.

An appendix gives the preparation of esters, the lepromin and iodide tests, and a report of the epidemiology of leprosy. Topics are clearly divided and indexed so that the book answers for easy reference.

THE DOCTORS MAYO, by H. B. Clapesattle, is a book that will soon be off the press. The J. A. Majors Book Company, Dallas, Texas, will send it to you. The price is $3.75.

MOTHER AND BABY CARE IN PICTURES, by Louise Zabriskie, R.N., Director Maternity Consultation Service, New York City. Second Edition, revised. 202 pp., 204 illustrations. Published by J. B. Lippincott Company, Philadelphia. Price, $1.50.

Nurse Zabriskie offers a revised, re-set edition of her first book, *Mother and Baby Care in Pictures*, for the ultimate reduction of infant and maternal mortality and morbidity. Her book is perfectly suited for the lay public, written in simple, understandable language and averaging an illustration to the page. The book covers every phase of fetal development, signs of pregnancy, care of the body, styles of clothing for mother and baby, signs of labor and other facts of vital interest to adults. Technique of delivery in the home and in the hospital, postnatal care, exercises, diet for mother and baby constitute chapters that will save much instruction by the doctor and insure a better understanding of childbirth by parents.

This book is recommended as a safe guide for parents who are anxious to follow authoritative and accurate advice to help insure the future health of their child. z

Mississippi State Medical Association

Organized 1867 **Next Meeting: May 12, 13, 14, 1942, Jackson**

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President-Elect—H. Lowry Rush, Meridian
Vice-Presidents—B. B. O'Mara, Biloxi
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Secretary—T. M. Dye, Clarksdale
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Fourth District—J. K. Avent, Grenada
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Sixth District—Lamar Arrington, Meridian
Seventh District—J. P. Culpepper, Hattiesburg
Eighth District—W. H. Frizell, Brookhaven
Ninth District—D. J. Williams, Gulfport

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Public Policy and Legislation:
Felix J. Underwood, Jackson
Henry Boswell, Sanatorium
W. H. Anderson, Booneville

Budget and Finance:
J. P. Wall, Jackson
J. B. Howell, Canton
J. S. Hickman, Meridian

Constitution and By-Laws:
H. Lowry Rush, Meridian
W. H. Frizell, Brookhaven
W. W. Crawford, Hattiesburg

Exhibits:
Dr. D. W. Jones, Jackson
Dr. Leon S. Lippincott, Vicksburg
Dr. W. H. Anderson, Booneville

Component Societies

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	W. R. Brumfield, Gloster	Anderson Butler, Liberty	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. A. Slack, Friars Point	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	C. A. Kirk, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	H. L. Scales, Jr., Starkville	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	C. E. Catchings, Woodville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.
Eye—S. S. McNair, Jackson.
Ear, Nose and Throat — Alston Callahan, Vicksburg.
Obstetrics and Gynecology—J. F. Lucas, Greenwood.
Orthopedics—Thomas H. Blake, Jackson.
Pathology and Clinical Pathology—John C. Henthorne, Jackson.
Pediatrics—Harvey F. Garrison, Jackson.
Public Health—Felix J. Underwood, Jackson.
Radiology and Roentgenology—Karl O. Stingily, Meridian.
Surgery—W. H. Parsons, Vicksburg.
Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

DERMATOLOGY

IRRADIATION IN DERMATOLOGY, by Anthony C. Cipollaro, M.D., *Radiology,* Vol. 36, No. 6, pp. 684-693, June 1, 1941. Copyrighted by the Radiological Society of North America, Inc.

The article deals with radium and x-ray used in the treatment of skin diseases and discusses the difference in technique used by radiologists and dermatologists, and the writer feels that since both are aimed at the curing, or amelioration, of skin disorders that this difference should not exist. He does not feel that any certain technique is better than any other but that the quantity and quality of the radiation should be determined by the clinical findings of each case, and that an understanding of the amount and kind of radiation required to produce a certain result in a given case should be used as the rule for governing the technique rather than any rule of thumb that might apply loosely to all cases generally and none in particular. As an example of this one might use 300r produced by a low pkv to produce a temporary epilation without danger to underlying structures, whereas one would probably need 700r of heavily filtered radiation to produce an epilation. It is easy to see that in such a case the underlying structure would receive much more radiation in the latter case than it would in the former.

Another point brought out is the Grenz ray which is generated at about 10 pkv penetrates very little farther than 1 mm. of skin, which would hardly get it beyond the basal layer, but x-ray generated at 50 pkv would be effective in treating a condition involving the pilosebaceous apparatus as x-ray generated at 100 pkv with much less radiation of the underlying structure. It would be unnecessary to attempt to describe all of the technique used in treating skin diseases since there are some very excellent textbooks on this subject, and since each x-ray set has to be calibrated individually.

The conclusions reached in this article are that: 1. High voltage and heavily filtered x-rays for the treatment of diseases of the skin are unnecessary and undesirable. 2. When one takes into consideration the pathologic histology of many cutaneous disorders and studies absorption curves obtained with radiations generated with 40 to 100 kv., the conclusion is reached that if a skin disease responds to non-filtered x-rays generated with 100 pkv., it should also respond to non-filtered x-rays generated with 40 pkv. 3. Those administering x-rays for the treatment of cutaneous affections should know something about the natural evolution and involution of the diseases they are treating. 4. The general principles of treatment with hard rays of deep-seated conditions do not apply to superficial therapy.

DANGERS INCIDENT TO THE INDISCRIMINATE USE OF RADIUM COMPOUNDS OR RADON IN THE TREATMENT OF CUTANEOUS DISEASES, J. A. M. A., Vol. 115, pp. 1996-1998, 12-7-40.

Dr. Anthony C. Cipollora deals with a situation which has arisen due to the relatively great amount of radium that has found its way into the country in the past decade.

The fact is brought out that medical students were formerly not taught a great deal about radium or radon, and that in spite of the great advance in knowledge concerning these agents many men are using them who are not familiar enough with their possibilities for bad results as well as good. This does not apply only to men in other specialties but to some dermatologists as well. This, of course, means that everyone using radium or radon should have special training and knowledge of general dermatology as well as special training in the use of radium and radon.

There are firms which sell or rent radium and radon that propose to furnish information as to how it should be used. This is not the way it should be inasmuch as the man who really directs the treatment has not seen the patient and could not know what was needed even if he were qualified to use the therapy himself, which he frequently is not.

This plea is not aimed at the curtailment of the use of radium, nor is it meant to keep patients who need this type of treatment from getting it, but it is much better they not have it at all than to get some of the sequelae that follow the improper use of it. The council on physical therapy desires to acquaint all physicians with the facts in the case in order that they may be guided accordingly.

The dermatologist of today is not the externist he was in days past, and he is always studying to find why certain dermatological conditions are what they are by research and by an understanding of histopathology generally and especially histopathology that deals with the peculiarities of skin diseases. He makes an effort to give definite answers about definite conditions and does not have to cover his ignorance by giving every condition he sees some long Latin name.

The treatment of various cutaneous neoplasms is taken up and discussed with regard to diagnosis and the best treatment or combinations of treatment that could be used. Nevi, hypertrichosis, hyperhidrosis, seborrhea, mycosis fungoides, and keloids are all discussed under separate headings, with discussion as to the selection of agents and the probable results.

State Board of Health

Felix J. Underwood, M.D.

GROWTH AND DEVELOPMENT OF THE MEDICAL LIBRARY

by Louise Williams, Librarian

May, 1941, marked the fifth anniversary of the organization of the State Board of Health Medical Library. This library is a general medical and public health collection for the use of health workers, physicians, dentists, nurses and others. For years, there was little or no organized collection of medical literature in the state to which these professions might look. However, the more literary-minded were agitating in behalf of such an objective as long ago as 1900, and perhaps much longer. In the *Journal of the Mississippi State Medical Association* for March, 1900, may be found the following editorial reflecting the interest and concern of the physicians of that part:

> In our state we have not a single medical library, as such. The reason of course lies in the fact that we have no really large towns in the commonwealth. This is of no consequence if one had but stopped to think, for a first class medical library could have been started years ago by being made a part of our great state library, which is now one of the finest in the United States. If our State Medical Association had just utilized its annual transactions and those received as exchanges as a nucleus, forming part of the state library, not many years would have gone by without substantial additions being made to it by legacy, etc., from medical men not alone from our own state, but from all parts of the union. As a starter, let us have such a plan for the Meridian meeting of the Association in April.

In spite of this interest, nothing seemed to have been done about it and the State Library proper grew into a more or less special collection pertaining to law and legal documents. This proved of tremendous value to the legal profession of the state and a great convenience to the legislators in working out the laws so essential to the state's interests and welfare. Important though this is, it goes without saying that an adequate reference collection of current medical books and journals is equally important in serving the state's welfare, considering the value of health and human lives and the assistance the medical library renders in keeping the physician up to date regarding concepts of diagnosis, treatment and prevention of various diseases and disorders.

It remained for the State Board of Health to assume the initiative in developing a useful collection of medical literature. Its steady progress of the last five years has been due largely to the interest and coöperation of the doctors, dentists, nurses and public health workers throughout the state. Medical libraries in other sections of the country have also shown sympathetic interest and have given substantial help in completnig essential periodical volumes needed for reference. Inter-library loan enables borrowers to have the benefit of the rich store of knowledge not in the State Board of Health Library.

A new boon to research work has been the introduction of microfilm in reproducing current articles, rare works and old books. This makes it possible to have access to a wealth of material heretofore unobtainable except within the reading rooms of the library possessing it. Last year the Army Medical Library, largest medical library in the world, became the principal source of microfilm copies of items pertinent to medical research. This service is operated on a non-profit basis for the benefit of those unable to consult the material first-hand. The charge is 25 cents for each complete article not exceeding 25 pages in length and 10 cents for each succeeding 10 pages or fraction thereof. Supplementing this valuable service is a weekly publication, sponsored by Friends of the Army Medical Library, entitled "Current List of Medical Literature" which is intended to acquaint the research worker with the latest advancements in his particular specialty, based upon current accessions of the Army Medical Library. More than 3,000 periodicals are regularly indexed, and of the 70,000 subject cards and more a year, it is considered that about 50,000 would be of sufficient importance to those engaged in experimental research to be included in the Current List. These services afford a real opportunity for taking advantage of the abundant resources of this valuable medical collection and at very low cost to the individual. There are a number of other outstanding sources for film copy, such as Columbia University, Johns Hopkins, Harvard, University of Michigan, University of Chicago, and others. The State Board of Health Library has access to a film reader in the Vital Statistics Division. However, newer and better models have been introduced in the last two or three years, and it is hoped to add one of them soon to the reading room as permanent equipment of the Library.

The rapid growth and changing character of the medical sciences demand emphasis as never before upon continuous study or some program of self-education. The quality of medical or dental practice of an individual will ultimately grow stale or deteriorate if not constantly refreshed and brought up to date through the recorded experiments and conclusions of others. A good medical library provides a real opportunity for expanding knowledge and also for solving problems of difficult diagnosis and treatment.

The State Board of Health Library is glad to extend borrowing privileges to licensed physicians, dentists, and public health workers in Mississippi. Books may be borrowed for a two weeks' period. References will be assembled upon request. The Library has a file of the *Quarterly Cumulative Index Medicus,* also the *Surgeon General's Index Catalogue,* enabling one to ascertain what has been written on any given subject during any period.

New books received in the Library since the last notice inserted in the *Mississippi Doctor,* are as follows:

Amer. Assn. for Advancement of Science—*Human Malaria.* 1941.

Amer. Pub. Health Assn.—*Community Organization for Health Education.* 1941.

Amer. Public Health Assn.—*Housing for Health,* 1941.

Anderson, G. and Arnstein, M.—*Communicable Disease Control.* 1941.

Bacon, Harry—*Anus-Rectum-Sigmoid Colon,* 2d ed., 1941.

Blumgarten, A. S.—*Textbook of Materia Medica, Pharmacology and Therapeutics.* 1941.

Brady and Kurtz—*Essentials of Gynecology.* 1941.

Brekhus, P. J.—*Your Teeth, Their Past. Present and Probable Future.* 1941.

Brown, Lawrason—*The Story of Clinical Pulmonary Tuberculosis.* 1941.

Butler, Geo. D.—*Introduction to Community Recreation.* 1940.

Cahn, L. R.—*Pathology of the Oral Cavity.* 1941.

Couch, W. T.—*Culture in the South.* 1934.

Davis, Michael M.—*America Organizes Medicine,* 1941.

Eastman, N. J.—*Expectant Motherhood.* 1940.

Frazer, W. M. and Stallybrass, C. O.—*Textbook of Public Health.* 1940.

Goldthwait, Brown, Swaim, and Kuhns—*Body Mechanics in Health and Disease.* 1941.

Goodman, I. and Gilman, A.—*The Pharmacologi-*

cal Basis of Therapeutics. 1941.

Harris, H. J.—*Brucellosis: Clinical and Subclinical,* 1941.

Jensen and Jensen—*Clinical Nursing in Medicine,* 1941.

Klein, A. C.—*Civil Service in Public Welfare.* 1940.

Kolmer, J. and Tuft, L.—*Clinical Immunology, Biotherapy and Chemotherapy.* 1941.

Lewin, Philip—*Infantile Paralysis,* 1941.

Lewison, M. and Freilich, E. B.—*Manual of Physical Diagnosis,* 1941.

Maternity Center Assn.—*Public Health and Obstetrics,* Part I, 1940.

Maxcy, K. F.—*Papers of Wade Hampton Frost,* 1941.

May, C. H.—*Manual of the Diseases of the Eye,* 1941.

Medical Clinics of North America—*Symposium on X-Ray and Radium in Diagnosis and Treatment,* July, 1941.

Merck and Co.—*The Merck Index,* 1941.

Moore, J. E.—*Modern Treatment of Syphilis.* 1941.

N. E. A. and A. M. A.—*Health Education,* 1941,

Odum, Howard W.—*Southern Regions of the United States,* 1936.

O'Rourke and Miner—*Dental Education in the United States,* 1941.

Pelouze, P. S.—*Gonorrhea in the Male and Female,* 1941.

Pelouze, P. S.—*Office Urology,* 1940.

Proceedings of the *First American Congress on Obstetrics and Gynecology,* 1939.

Salsbury, C. Russell—*Introduction to Pathology,* 1941.

Silverman, Milton—*Magic in a Bottle,* 1941.

Slaughter, F. G.—*That None Should Die,* 1941.

Spink, W. W.—*Sulfanilamide and Related Compounds in General Practice,* 1941.

Strode, Josephine—*Introduction to Social Case Work,* 1940.

Turner and McHose—*Effective Living,* 1941.

Wales, Marguerite—*The Public Health Nurse in Action,* 1941.

Walker and Randolph—*School Health Services,* 1941.

Williams, Jesse Feiring—*Personal Hygiene Applied,* 1941.

* * *

MISCELLANEOUS NOTES

The next meeting of the Mississippi State Board of Health will be held in the Library on Tuesday, December 9, at which time there will be a review of public health activities in the state. Also, any new regulations considered desirable for the more efficient execution of the health program will be presented and acted upon. The members of the Board are: Dr. J. W. Lipscomb, president, Columbus: Dr. S. E. Eason, New Albany; Dr. L. B. Austin. Rosedale: Dr. B. J. Shaw, Slate Springs: Dr. W. H. Banks, Philadephia; Dr. H. L. McKinnon, Hattiesburg; Dr. L. W. Brock. McComb; Dr. John B. Howell, Canton; Dr. Wm. R. Wright, Jackson; and Dr. Felix J. Underwood, Jackson.

* * *

The American Public Health Association, at its annual meeting in Atlantic City, October 14-17, elected Dr. Underwood to its nine-member executive board. Dr. R. N. Whitfield was chosen as chairman of the Vital Statistics Section for another year.

Dr. Underwood, who is President of the Southern Branch of the American Public Health Association, will preside over that group when it meets November 10-13 conjointly with the Southern Medical Association at St. Louis. The theme of his presidential address will be public health and national preparedness.

* * *

Dr. E. W. McHenry, associate professor of physiological hygiene, at the University of Toronto, visited the state during October for the purpose of studying the nutritional status of various groups. Representing the Rockefeller Foundation, this work is part of a Southern states survey to determine nutritional conditions. An outstanding nutritionist, Dr. McHenry declared that nutrition is not the panacea for all ills, but when put to proper use it is a most valuable tool in public health. The number of deficiency diseases and general low level of health caused by dietary ignorance and indifference is a challenge for more widespread education regarding nutrition. Dr. Thomas Parran told the National Nutrition Conference in May that, "If we replace an *average* diet with an *adequate* diet, we get a 10 per cent increase in the active virile life span. This would mean more in terms of human longevity than to wipe out cancer as a cause of death."

County Societies

DESOTO COUNTY

Walter Malone, the poet, the lawyer, the judge, the raconteur and the Southern gentleman, was nigh a DeSoto Countian, his birthplace and home being near the Mississippi-Tennessee line in Tennessee. His brother, Dr. F. M. Malone, still practices medicine in that neighborhood. Judge Malone died in Memphis a number of years ago. He was best remembered everywhere as the author of the following poem:

OPPORTUNITY

They do me wrong who say I come no more
When once I knock and fail to find you in;
For every day I stand outside your door,
And bid you wake, and rise to fight and win.

Wail not for precious chances passed away,
Weep not for golden ages on the wane;
Each night I burn the record of the day—
At sunrise every soul is born again.

Laugh like a boy at splendors that have sped,
To vanished joys be blind and deaf and dumb;
My judgments seal the dead past with its dead,
But never bind a moment yet to come.

Though deep in mire, wring not your hands
and weep;
I lend my arm to all who say, "I can."
No shame-faced outcast ever sank so deep,
But yet might rise and be again a man.

Dost thou behold thy youth all aghast?
Dost reel from righteous retribution's blow?
Then turn from blotted archives of the past,
And find the future's pages white as snow.

Art thou a mourner? Rouse thee from thy
spell;
Art thou a sinner? Sins may be forgiven,
Each morning gives thee wings to flee from
hell,
Each night a star to guide thy feet to
heaven.

* * *

We were told by a minister today that he had an urgent request from a young man to send him a baptismal certificate. He was applying for a job in a defense plant and he needed proof of date of birth. Confirmation certificate, insurance policy, marriage license, family Bible, hospital record or any other satisfactory evidence are much sought for. It is estimated that 60,000,000 Americans born in this country have no documentary evidence of citizenship.

Mississippi has an excellent record of her births and deaths since this bureau was established by the Board of Health about thirty years ago.

* * *

The North Mississippi Medical Society held its semi-annual meeting Friday, October 3, 1941, in the Graduate School Auditorium University, Mississippi. The essayists were Dr. H. L. Rush, of Meridian, Dr. Lynn Abernathy, of Oxford, and Dr. M. W. Holehan, of Memphis, Tennessee.

The officers of this live organization are Dr. Benjamin Strong, of Lamar, president, and Dr. A. H. Little, of Oxford, secretary.

* * *

In our experience as examining physician for the local draft board, we have seen little evidence of malingering or any selectee going to any means or measures to escape being placed as he should. We always advised those rejected for any cause to have their maladies corrected as soon as possible. Even a 4-F can be made a more satisfactory worker and a better citizen by having his ills improved or corrected. Rehabilitation, to some extent, should be in the offing.

* * *

Better than average yields of most Mississippi food and feed crops are in prospect for this season, the United States Department of Agriculture reports. Total production of corn is placed at 47,753,000 bushels. Mississippi farmers raised 152,000 turkeys during 1941. The weight of turkeys continues to increase due to the growing popularity of the broad-breasted type.

Prices of commodities and labor have both risen and it is to be hoped that the doctor will share in this general prosperity. America is endeavoring to feed and help her allied forces in their fight against Hitlerism, "That all men in all lands may live out their lives in freedom."

* * *

"The permanent basis of medicine is not its research, but its application, or practice. What I ask is not any decrease in medical research but that medical research and medical practice be recognized as distinct but equally important, equally skilled, equally valuable parts of medicine as a whole. I ask that we may recognize that a physician may be a great doctor without doing original and basic laboratory investigation: that such research belongs to the research investigator and practice to the practitioner. And most of all, I hope that we will go back to the training of medical students clinically by great clinicians, to be great clinicians."—Prof. H. W. Haggard, of Yale University.

* * *

The doctor examined him twice a year. He wore galoshes when it rained. He slept with his windows open. He stuck to a diet with plenty of fresh vegetables. He got at least eight hours' sleep every night. He never smoked, drank, or lost his temper. He did his daily dozen. He was all set to live to be a hundred.

The funeral took place yesterday; he had forgotten about motor cars.—*Medical World.*

Rt. 4, Memphis, Tenn. L. L. Minor,
October 20, 1941. Editor.

NATCHEZ CHARITY HOSPITAL STAFF MEETING

The staff of the Natchez Charity Hospital had as its guest essayist for the regular October meeting, Dr. Isidore Cohn of New Orleans, La. Dr. Cohn's subject was "Injuries to the Hand." In addition to the full attendance of members of the staff, three former members of the hospital staff of years gone by, Dr. Joseph Whittaker, St. Joseph, La., Dr. E. F. Ferguson, Clayton, La., Dr. Blackman Harper, Fayette, Miss., were present.

Preceding the meeting a delicious supper was served in the doctors' dining room.

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HAVE YOU RECEIVED YOUR YEARBOOK?

The yearbooks this year were mailed to each member in the state, but there is a possibility of a few being missent because the publisher could not procure all street addresses. Please check at the post office if your yearbook has not arrived.

SOUTH MISSISSIPPI AUXILIARY

The South Mississippi Medical Auxiliary met October 15 at the home of Mrs. P. E. Smith in Hattiesburg for a delightful fall meeting. Twenty-four members were present to enjoy a course luncheon, at which Mrs. W. K. Stowers, state president, was honor guest. A musical program included vocal selections by Mrs. C. C. Hightower and Mrs. L. W. Martin, accompanied at the piano by Mrs. Smith.

The auxiliary president, Mrs. Carroll McLeod, presided at the business session, which was highlighted by Mrs. Stowers' message of emphasis of goals for the year. Four new members, Mrs. Simmons of Poplarville, Mrs. Barron of Columbia, Mrs. A. K. McMillan and Mrs. J. W. Horn of Lucedale, were welcomed by the group.

Co-hostesses with Mrs. Smith in dispensing this gracious hospitality include Mrs. R. R. Halfacre, Mrs. R. E. Schwartz, Mrs. Mason McKinnon, Mrs. V. C. Temple, and Mrs. N. C. Felts.

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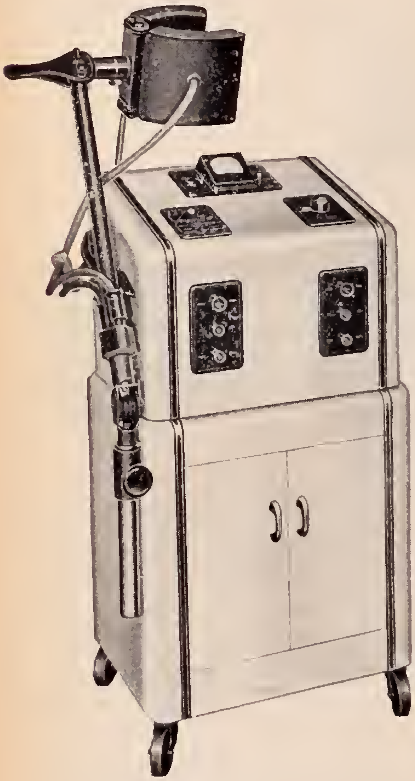

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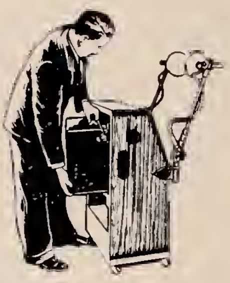

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Clinical observations of Strauss and McDonald lead to the conclusion that the condition is a dietary deficiency disorder similar to beriberi, caused by lack of vitamin B_1. They report recovery in their cases receiving this therapy, including dried brewers' yeast.

Hyperemesis as Cause of Avitaminosis

Wechsler observes that all cases of polyneuritis of pregnancy recorded in the literature were preceded by long periods of severe vomiting. "It would seem," he adds, "that because of actual starvation these patients suffered from avitaminosis and consequent neuritis," a view likewise held by Hirst, Luikart, and Gustafson. Plass and Mengert observe that the practice of giving high carbohydrate feedings for hyperemesis gravidarum is still more likely to cause avitaminosis.

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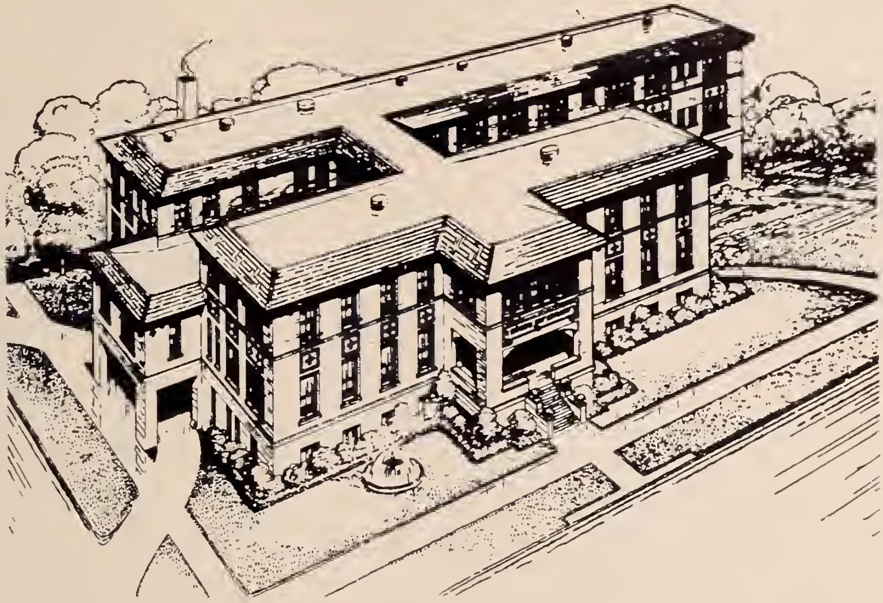

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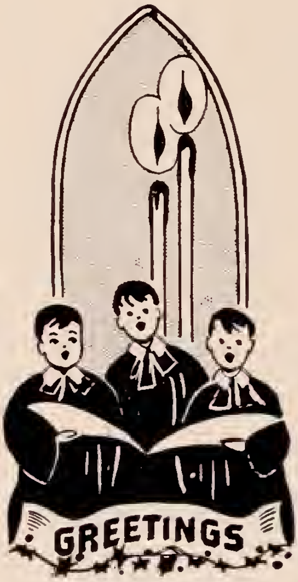

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Some Phases of Plastic Surgery About the Eye*

JOHN M. McLEAN, M.D.
From the Wilmer Ophthalmological Institute of the Johns Hopkins Hospital and University
BALTIMORE, MD.

It is quite impossible to cover all the aspects of ophthalmic plastic surgery in a short talk. Many books have been written in such an attempt without any of these being complete. Therefore I shall deliberately omit or mention only briefly many of the commoner and better known procedures.

There is one question which often raises itself at this point. Who should perform the major part of the plastic and reconstructive surgery about the eye? Is it legitimately the field of the ophthalmologist or of the general plastic surgeon? While the ideal situation might be a coöperative arrangement including both, such is rarely practicable. I firmly believe that the surgeon whose knowledge of intricate ocular problems is intimate is more suited to handle these cases than the one who may have had a little more experience with skin grafts and such procedures but whose ocular instincts are more remote.

On the other hand, is the ophthalmic surgeon prepared to handle the plastic aspects of the problem? I think he is. Although the plastic surgeon's cry is that his work is too delicate, requires too exact a technique for ordinary mortals, not even his work reaches the extreme delicacy of our ordinary intraocular surgery.

PRINCIPLES OF TECHNIC

The principles of technic are summed up in: careful and accurate planning, gentle handling of tissue with minimum trauma, and adequate hemostasis. It is important to plan carefully so that incisions can be made in single bold strokes; to use sharp clean-cutting knives rather than tissue-crushing scissors. Scar tissue must be radically excised while normal tissue is preciously conserved. Tissues should never be handled with heavy forceps when gentler instruments will do, should not be handled at all unless absolutely necessary. Hemostasis must be complete and minute but buried ligatures should always be avoided when pressure and patience will suffice.

Suturing demands more than ordinary care. Transplanted tissues should never be under tension and edges should be most meticulously approximated to minimize scar tissue. When tension is removed very fine sutures can be used. Fine silk or horse hair are suitable for skin sutures but I personally prefer Kaldermic sutures on atraumatic needles—as fine as 6-0 or 8-0. Anesthesia is sometimes a problem but as a rule it is wise to use general anesthesia when in doubt. As far as possible local anesthesia should be confined to nerve block and local infiltration avoided because of the tissue distortion it produces.

PRINCIPLES OF APPROACH

We come then to the principles of plastic operations which are applicable to ophthalmology. They may be divided into four general groups: (1) geometrical patterns to produce minor readjustments of tissue, (2) resection of scars with secondary closure of the defects, (3) pedicle grafts and sliding flaps of adjacent tissue, and (4) free grafts to fill large defects.

Geometrical Patterns. The usual geometrical patterns are well known and call for little elaboration. The simple V-Y or Y-V patterns allow somewhat less shortening or lengthening than the stem of the Y. The delta-Y, and T-Y patterns are similar but less neat and rarely used. The Z-plastic is particularly applicable to long linear contractures which require lengthening without scar resection. Here, as the 60° triangles are reversed, the gain, which is always along the line of the central incision, is 1.7 times the length of the original incision.

Scar Resection and Suture. Resection of long narrow scars either for cosmetic effect or for release of traction may often be followed by simple closure in a neat, carefully planned suture line. If the scars are too wide or too extensive, sliding or even free grafts may have to be added. It is important to close these in a fashion designed to minimize further scarring and scar traction. The most important is Wheeler's method of "halving" closure. In vertical scars of the lids, where this closure is particularly useful, the lower flap should consist of conjunctiva and tarsus; the upper, of orbicularis and skin. I have found it more satisfactory to use a few fine absorbable sutures for closure of the deeper layer. By burying these knots trauma to the cornea can be avoided. It is well worth while to close original lacerations in this fashion to avoid late notching of the lid margin. If the scar is longer and reaches down onto the cheek it may also be advisable to use a staggered line of closure. This is another device for minimizing scar tissue traction by offsetting the lines of contracture. Many cases of notched lids or cicatricial ectropion may be due to scars narrow enough that excision and primary closure should always be thought of before more extensive plans are laid. However, situations also arise in which a soft scar is not unsightly but has produced enough traction to distort the lid. In these cases even simple scar resection and suture may better be supplanted by the still simpler Z-plastic.

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*Presented before the Louisiana - Mississippi Ophthalmological and Otolaryngological Society, at New Orleans, La., on April 25, 1940.

Pedicle Grafts. The next step after simple scar excision and suture is the use of sliding flaps of adjacent skin to release tension or fill defects left by the excision. These flaps must be individually planned for each case. In general all that can be said is that it is important to make the flaps large enough and plan them carefully. Spaeth advises making a pattern by laying tissue over the original defect and then planning the operation by incisions in the tissue until adequate correction is obtained. Probably the necessity for this type of planning varies inversely with the surgeon's experience and ability for visualization. A simple example is a vertical scar of the lower lid, as commonly seen after windshield injuries. If such a scar is too extensive for simple resection and halving closure, a large curved sliding flap should be outlined with a small relaxation triangle at its base. In order not to stretch the lid too tightly it may also be necessary to perform a canthotomy with a relaxation triangle above. The conjunctiva may then be readjusted to keep the outer canthus neat. In closing the long incision, halving should be performed for the length of the lid tapering off below. It is well to angle the sutures along the incision so the tension will be evenly distributed. More complex excisions often require multiple sliding flaps for neat closure but the principle is the same.

Large flaps on long pedicles, tube grafts from the neck, delayed transfer grafts from distant parts of the body have little place in modern ophthalmic plastic surgery. In earlier days when asepsis and antisepsis were less reliable and crude anesthesia required hasty surgery, they were widely used. Practically every situation in which these "Indian" or "Italian" methods were used can now be better handled by free grafts of one sort or another, with a neater end result and often fewer stages.

Free Grafts. Among free grafts there are many choices. Most useful are the full thickness or Wolfe graft, the modified Ollier-Tiersch or large epidermic graft and the modified Reverdin "pinch" or Davis "small deep" grafts. In addition to skin grafts are mucous membrane grafts, fascia lata, cartilage, and fat grafts, and corneal grafts. The latter will not be considered in this paper. When free full thickness skin grafts are required to fill defects too large to be covered by the preceding methods there are two important considerations which I fear are given too little attention. The first is the method of taking and handling these grafts. The required area of skin is outlined with a sharp knife. Then the temptation to seize the graft with heavy forceps and chew it out with scissors must be resisted. Instead, a long sharp cataract knife is passed under the center, between skin and subcutaneous tissue and the graft is cut in exactly the same fashion that a cataract section is made. Light traction behind the knife with an ordinary muscle hook is useful but it is wholly unnecessary to traumatize the tissues with forceps. The graft is undermined up to but not through the very end, then the knife is reversed and the opposite half cut in similar fashion. Now if a suture is placed at the tip of each end of the graft before the very ends are severed, the entire tissue may be handled by the two sutures and all trauma avoided. If the cataract knife section is perfect there will be no subcutaneous tissue on the bottom of the graft. If there is, it may be everted over the fingers and any small islands snipped off with scissors. A clean, free, bloodless bed to receive the graft is essential. The edges of the graft are carefully sutured in place and a firm pressure dressing applied. Multiple fluffs of gauze or a sterile sea-sponge help in even distribution of pressure but a lightly greased layer of tissue to prevent adhesion should be placed directly over the graft. The next temptation to be avoided is early postoperative inspection. Nothing can be accomplished by dressing the graft during the first week but satisfaction of the surgeon's curiosity and damaging displacement of the new tissue.

The source of these grafts merits considerable attention. When they are to be used about the eyelids neither arm, leg, nor abdominal skin is satisfactory. All such grafts are too thick, too stiff, too hairy, and a poor match in color. The best source for a graft is the skin of the opposide lid where an amazingly large area of skin can be taken without leaving any defect. The second best source is skin from the cephalo-auricular angle. If the auricle is sutured forward to the cheek such a graft is readily obtained leaving no noticeable defect. Any additional trouble in taking these grafts is well rewarded by skin which is a perfect match in every respect.

When large thin epidermic grafts are required they should be cut with a razor from the thigh or abdomen but thinner than Ollier-Tiersch grafts so that only true epidermis is included.

For large granulating irregular cavities, such as an exenterated orbit, Reverdin, or better still, Davis grafts are useful. These pinch grafts are easily obtained by lifting a small cone of skin on the tip of an intestinal needle and cutting off the base. Here again a cataract knife is practically ideal and, I find, easier to handle than any of the instruments commonly used by plastic surgeons. The graft is kept on the needle and transferred directly to its bed. This type of graft is useful when a granulating surface is too irregular to be fitted accurately with a Tiersch graft or when perfect asepsis cannot be assured.

When conjunctiva must be replaced in the presence of a good eye, it is imperative to use mucous membrane. If sliding flaps of conjunctiva will not suffice, a free mucous membrane graft is necessary. In spite of all rumors to the contrary, any grafted skin which can come in contact with the cornea is a source of permanent irritation and chronic superficial keratitis. This fact is well established in the literature and we have had to correct this situation too many times to have any doubts on the subject. Why surgeons continue to make this mistake for others to undo is a mystery. Very suitable mucous membrane may be obtained in the mouth, and I have never had occasion to go farther afield and attack the prepuce or labia. In the mouth local procaine infiltration not only gives adequate anesthesia but raises the mucous membrane so that a suitable graft may easily be taken with a cataract knife. Again there is little call for the chewing action of scissors. If the source of the graft is left alone it will heal well and promptly with very little discomfort.

Illustrative Cases

Let us look at some problems to which these principles have been applied. I do not wish to spend too much time on simple senile ectropion but I would like to make one suggestion. Nearly all the books state that the standard Khunt-Szymanowski operation is the best all-round procedure. Of this there can be no doubt. However, it sometimes happens that, instead of general eversion of the lid, there is almost a marginal ectropion—a virtual rolling out of the top of the lid. Here the flat tissue readjustment of Khunt-Szymanowski is not ideal. An Imre modification of Argyle Robertson's "strap" operation will produce better correction without undue tightening of the base of the lid.

One patient shows both bad initial handling of a vertical lid laceration and subsequent repair. This colored boy had been well carved up with a razor. One laceration was a through-and-through wound of the lower lid on the side where his eye had previously been removed. He was handled by a general surgeon who thought simple end-to-end closure was good enough for any eyelid. We had occasion to see him and photograph him immediately after his sutures had been removed. We saw him many months later and photographed the end result with the unsightly scar and cicatricial ectropion. Then a scar excision and careful closure in layers along the principles of the halving operation gave an adequate final result. Proper closure in the first place would, in all probability, have resulted in a satisfactory initial healing.

Further cases show the use of full thickness skin grafts to correct cicatricial ectropion with massive scars. When these grafts are used it is always important to remember to fasten the lid margins together in a permanent tarsorrhaphy. The lid margins are denuded and sewed together so that lasting adhesions form. They must be left in place for several months until healing and contraction are complete. When lashes need to be replaced the graft may include a line of hairs from the lower part of the brow. One illustrative case shows the use of these grafts. First a full thickness graft to the lower lid from behind one ear; later, one from behind the other. In a still later stage a graft was taken from the loose sound upper lip to supply necessary skin for the scar-shrunken upper lid. Finally the tarsorrhaphies were opened and the end result shows adequate function with considerable cosmetic improvement.

In addition to lids, orbits offer definite problems. A common one is a contracted socket after enucleation. The socket must be deepened to hold a prosthesis and lined with epithelium to prevent contraction. Since there is no cornea to worry about after enucleation it is not necessary to use mucous membrane. An excellent result can be obtained by extension dissection to form deep cul-de-sacs and lining the cavity with epidermis. The dissection should not be taken too far posteriorly but should come anteriorly as far as the tarsal plates. At the top of the upper dissection care must be taken to protect the levator muscle of the upper lid. Wide temporary canthotomy aids in exposure. When dissection is completed a mold of dental wax is made to fit the new socket. Then a thin epidermal graft is taken with a Tiersch razor and wrapped around the mold with the raw surface out. It is fitted in place and the lids sewed over it for nearly two weeks. At the end of this time the mold can be removed and the new cavity will be found neatly lined by epithelium. A properly taken thin epidermal graft will not grow hairs. This operation is a very simple but very satisfying one and transforms an ugly disfigured patient into a presentable individual with a comfortably fitting glass eye.

Another orbital problem is the raw granulating surface left after radical exenteration. A raw, weeping unpleasant socket can be rendered clean and dry by lining it with skin. Large grafts, however, are very difficult to handle and fit to such an irregular surface. Full thickness grafts do not do well. Tiersch grafts may be used in multiple strips but I have had greater success with the use of many small pinch grafts. They take well, grow rapidly and serve as initial islands from which epithelium rapidly spreads until all the grafts coalesce and the orbit is lined with smooth skin. The result then is a clean dry orbit into which may be fitted a large light, spectacle-supported prosthesis.

An illustration of the use of free mucous membrane grafts is a case of a negro with extensive lye burns of both eyes. The initial burn caused considerable tissue necrosis which healed with extensive conjunctival scarring and contracture. In an attempt to prepare him for later keratoplasty the cul-de-sacs were dissected out and lined with mucous membrane to give an adequate field for later work.

Another mucous membrane case was a rather unusual one. A patient had had repeated excisions and radiation for persistent pterygium. The end result was such extensive scarring that when he closed his eyes his lids turned out, there was always some ectropion, and when he tried to look to either side there was so much restriction of abduction that he actually had diplopia. The scar tissue was removed, the normal structures were freed and the resulting exposed area covered with grafts from his hip. Healing was uneventful.

A third case is an old lime burn. The lower lid was adherent to the cornea and the lower cul-de-sac was obliterated. The lid was freed and the cul-de-sac repaired and lined with a lip graft. It took well and a cornea graft was later performed.

Another patient had an old windshield injury. His lower lid was much too far templeward and the upper was split and badly notched with exposed and hypertrophied conjunctiva. In the first stage a long modified Y-V pattern placed the lower lid in good relative position. The hypertrophied conjunctiva was trimmed, and turned in, with a Snellen suture. In a later stage the base of the notch was freed and released but the scarring was too extensive to allow complete repair of this defect without a further stage.

As a final case, I would like to show the problem presented by a large dark malignant tumor involving both skin and conjunctiva of the edge of the upper lid. Radiation was not satisfactory. Radical full-thickness excision was required. With a normal eye beneath, it was necessary to provide adequate protection in a single stage. All the procedures in the literature are either multiple stage operations or are very satisfactory for one reason or another. None gives good reproduction of the normal lid structures. Therefore it was decided to model a new operation in the Hughes type of lower lid repair. Full thickness lid was excised with skin relaxation triangles. Then the lower lid was split and tarsus and conjunctiva brought up from it. They were sutured to conjunctiva and levator muscle above. A strip of orbicularis muscle was carefully swung down from the brow to replace that lost by excision and a skin flap from above used to close. These new conjoined lids were left together for eight weeks and then opened under local anesthesia. Opening and closing were well performed. Six weeks later a hair-bearing graft was taken from the opposite upper brow and used from lashes for the newly-made upper lid.

Society's Debt to the Doctor*

LAWRENCE T. LOWREY, Ph.D.
President of Blue Mountain College
Blue Mountain, Mississippi

Mr. President, it is said

"Every lane has its turning,
There's fuzz on every peach;
There never was a program yet
Without a closing speech."

It seems that these closing speeches usually come rather late, about the time most of us are ready to depart. I have decided to start a movement for the abolition of closing speeches. In fact, every time I have been the last speaker and have advocated this policy, the audience has agreed with me heartily.

I am asked to speak on "Society's Debt to the Doctor." I am glad that I shall have the privilege of saying a few things on this topic and saving them to a group of physicians and their families, because for years I have felt a personal sense of obligation to the few doctors my own family has patronized, to many other doctors whom I have known personally, and to the physicians in general. As I have reflected upon the content of this little talk this evening, my desire to pronounce an encomium on the medical brotherhood has been intensified, and I know that it is a real privilege that I have to say these things in commendation of you men who in such a definite and unusual way have dedicated yourselves to the betterment of mankind.

Recently on a radio program I heard an expression of this kind: "Dr. .... is a superior physician and a superior human being." It has often occurred to me that nearly all physicians are superior human beings. Most of them were so before they entered the profession—or they would probably have gone into something else. Their constant contact with lesser human beings, especially at times when the rest of us exaggerate our own foibles and pettiness—I mean when we are ill—seems to emphasize the littlenesses of mankind and cause the physician to shun such things. Yes, most doctors are big men, "superior human beings."

Next, I want to commend the medical profession for its optimism and good humor. Most of us do not like to have jokes told about us. No matter how unreasonable the jibes at the physician may be. I find that the doctor maintains his cheerful spirit and chuckles at jokes on his profession.

To illustrate: Consider the matter of the physician's fee. Surely it is, as a rule, as reasonable as anyone could ask, and sometimes ridiculously low. The doctor will laugh with you, however, even at such stories as these:

Patient: "Doctor, what I need is something to put me in fighting trim. Did you put anything like that in this prescription?"

Doctor: "No. You will find that in the bill."

Or

Elderly patient: "As we have known each

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*Address delivered on Public Night during the annual meeting of the Mississippi State Medical Association, Biloxi, Miss., May 14, 1941.

other so long, doctor, I do not intend to insult you by paying my bill. But I have left you a handsome legacy in my will."

Doctor: "That's very kind of you, I'm sure. By the way, just let me have that prescription again. There's a slight alteration I want to make in it."

Or

First physician: "What did you treat him for?"

Second physician: "For $200.00."

First physician: "No, I mean what did he have?"

Second physician: "$200.00."

Another form of merriment at the expense of the doctor involves his disposition to boast —which spirit is about as far from the doctor as can be imagined. The story is told, for instance, of the doctor who was bragging about the fact that his patient was greatly indebted to him for saving his leg.

"When the man was brought to me," the doctor is supposed to have said, "I could readily see that his leg had been mangled in such a way as to make amputation immediately necessary. I, therefore, prepared hastily for the operation, and in my zeal I made a mistake and cut off the uninjured leg. When I had finished, I noticed to my consternation that I had removed the wrong limb. I, therefore, determined that rather than see the poor man go through life without any legs at all I would make a desperate effort to save the crushed member. By my skillful service then I manged to save the injured leg. Surely my patient should be greatly indebted to me."

Faculty members in the medical schools are supposed to be boastful at times. The story is told of a member of the faculty in a London medical college, who was appointed an honorary physician to the king. He proudly wrote a notice on the blackboard in his classroom:

"Professor Jennings informs his students that he has been appointed honorary physician to His Majesty, King George."

When the professor returned to his classroom in the afternoon he found written below his notice this line: "God save the King."

Even Shakespeare is misquoted at the expense of the physician. In the first act of *Macbeth,* where King Duncan happens upon a wounded sergeant and says to his attendants: "Go get him surgeons," the amateur who played the part of the King misquoted it as: "Go get him, surgeons!"

But the physician exercises the greatest forbearance even when the story is at his expense.

Mankind in general does not find it easy to change its opinion. In some professions the members having learned what's what are inclined to assume a static world and to be impervious to new ideas. I have found that physicians are not so. I do not know a group of men who are more anxious to keep abreast of the times and determined to know the latest method and the latest cure. Some of us object to revising our opinions. I spent the night in the home of a friend recently, and the next morning his seven-year-old son watched me while I was shaving. He said nothing until I had about finished and then addressed me thus: "I wish I was grown." When I asked him why, he quickly replied: "So that I could have whiskers, spectacles, and false teeth." That young man will doubtless find it advantageous to revise his opinions, but much of mankind will persist in the error of its way and in many cases even when it is obviously wrong. Not so with the doctors. Unlike the blind man who saw the elephant, the physician is anxious, even determined, to know all the facts, to get at the trouble from every angle, and to give the patient the benefit of as complete knowledge as possible.

A few years ago I met a famous newspaper columnist. I had read his articles frequently in the daily press and had enjoyed them. Upon one occasion, however, he slipped up rather terribly in a paragraph concerning certain educational matters; and as that happened to be in my own field, I knew definitely that he was grievously wrong. When I met him I told him how I had relished his articles from day to day, and then—perhaps I should not have said it—I continued with this: "In one article a few weeks ago you were guilty of a certain inaccuracy, and if you would like to have me do so I should be glad to tell you about it." Instantly his smile vanished and he glared at me as he said: "I did not do any such thing, and neither you nor anyone else can tell me that I made a mistake. I never make mistakes." Physicians are not so. Virtually all of them will admit that upon occasion they have not pursued the most fortunate course, but almost invariably they are anxious to overcome deficiencies and keep abreast of the times, giving every patient the benefit of the most modern research.

At this point I must commend especially that great individual known as "the country doctor." I know few such men who could not have been successful "city doctors" if that had been their choice. Some of us are inclined, I am afraid, to rank or grade a physician by the size of the town in which he practices. When I was a boy, my father taught me a lesson which I shall not forget. He was a public lecturer and that was his profession for thirty years. In his lecture tours over the nation, in virtually every state, he naturally became acquainted with many of the outstanding and most famous people in the United States. He was invited upon one occasion to speak at a banquet on this assigned subject: "Great People I Have Met." It was assumed by members of the program committee who had extended the invitation that he would comment on a few nationally known characters whom they knew to be his friends, including William Jennings Bryan, Senator Albert J. Beveridge, the elder Bob LaFollette, and men of such rank. To the surprise of everybody, he began his address by saying: "I want to talk this evening about three of the greatest men I have known—Louis Colter, Bill Sanders, and Rat Ray." These men were known to the group, as they all lived in the community. The first was the manager of a small dairy, the second a "five-bale farmer," and the third a carpenter who probably never received over fifty cents an hour in his life. You will readily guess then that the burden of Dad's remarks was to the general effect that greatness does not necessarily result in fame.

The country doctor may have elements of greatness which his city brother does not possess, and he arouses my constant admiration through his devotion to his profession and his clientele, regardless of fame or fortune. I recently spent the night in the home of a country doctor. He and I were just ready to retire about eleven o'clock, when the phone rang and he was summoned hastily to a humble home three or four miles outside the little town in which he lived. I decided to wait up for him until he returned. A little before midnight he came back, saying that by the time he reached the home of the patient everybody was asleep and he was never able to arouse anyone. He, therefore, went on to bed. At four o'clock the phone rang and an irritated voice at the other end of the line demanded to know why the doctor had not made the call as requested. When he calmly explained that he had responded promptly and told the circumstances, the complainer admitted that what he had said was presumably true, but insisted that he should come back again. I felt that if I had been the doctor—and, incidentally, there was snow on the ground that night—I would have refused to return. Did the doctor refuse? Oh no, he went immediately and ministered to the needs of the patient.

For many reasons the doctor deserves our praise. He is a select individual. A few years ago Dr. William P. Few, president of Duke University, told me that the medical college of that great institution was planning to admit only seventy-five freshmen for the following session and that of the first thousand applicants examined only twenty-two had been accepted. Yes, the modern young physician is a select individual.

We honor the physician for what he knows. Before he can enter the medical college he is commonly required to have the degree of Bachelor of Science from a standard college. Then he must know medicine—four years in a medical college and a very minimum of one year as an interne. Then he must know people. He must be a philosopher and a profound psychologist. He must know the Golden Rule—and direct his life in accordance with it. The ethics of the physician is based upon it.

The doctor is entitled to our gratitude. He has prolonged our lives and eased our pain. Queen Anne of England, only a little more than two hundred years ago, was the mother of seventeen children; and the one who lived to be oldest, the little Duke of Gloucester, died when he was twelve years of age. It was not unusual even at that time for parents to give three or four children the same name, in the hope one of them might live to be grown. Contrast that condition with the present, in which the average life expectancy of the average baby in America is more than sixty years. For such progress we are grateful to the physician.

The doctor is entitled to our affection. I need not give instances, as you know plenty of doctors yourself. Somehow, however, I can not refrain from mentioning Willis Campbell, of Memphis, who through his Crippled Adults' Hospital alone earned the undying devotion of many hundreds of crippled men and women —and he never charged a single dollar to any patient admitted to that remarkable institution.

My father used to say to me: "Only he is interested in health who does not have it." Thanks to the doctors, most of us have more of that commodity, health, than we are really entitled to, judging by the way most of us defy the laws of nature.

My hat is off to the doctor, and I regret my inability to express adequately the great debt which society owes to him.

Fee Splitting*

ISIDORE COHN, M.D., F.A.C.S.
Senior Surgeon, Touro Infirmary, Charity Hospital, Professor of Surgery, Associate Director of the Department of Surgery, Graduate School of Medicine, Louisiana State University.
NEW ORLEANS, LA.

A DIPLOMA in medicine and a license to practice signifies that one has become a member of a profession which has accepted as one of its fundamental tenets the oath of Hippocrates. In this oath we find:

"With purity and with holiness I will pass my life and practice my art. Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption.

"While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, at all times, but should I trespass and violate this oath, may the reverse be my lot."

Turning to DeChauliac, we find his advising reference to ethical attitude in the following:

"Let the surgeon be bold in all sure things, and fearful in dangerous things; let him avoid all faulty treatment and practices.

"He ought to be gracious to the sick, considerate to his associates, cautious in his prognostication.

"Let him be modest, dignified, gentle, pitiful, and merciful; not covetous nor an extortionist of money; but rather let his reward be according to his work, to the means of the patient, to the quality of the issue, and to his own worth."

Maimonides in the twelfth century said:

"Inspire me with true love for this my art and for Thy creatures, grant that neither greed for gain, nor thirst for fame, nor vain ambition, interfere with my activity.
For these, I know, are enemies of Truth and
Love of men,
And might beguile one in profession
From furthering the welfare of Thy creatures."

The first code of modern medical ethics was begun in 1792 by Thomas Percival, of Manchester, England. The work was undertaken at the request of the physicians and surgeons of the Manchester Infirmary. The author in the preface to his work stated:

"that he was induced by an earnest desire to promote the honor and advancement of his profession, and to frame a general system of medical ethics; that the official conduct and mutual intercourse of the faculty might be regulated by precise and acknowledged principles of vanity and rectitude."

The work was interrupted because:

"He lost the strongest incentives to its prosecution by the death of a beloved son." Years later he resumed the work. "Animated by the hope that it may prove beneficial to another son who had lately exchanged the pursuits of general science at Cambridge for the study of medicine in Edinburgh."

The work was finally completed and published in 1803.

As we review the work of Percival, we see that he was prompted by two idealistic motives; one, the desire to be true to his obligations to the practice of medicine, based largely on his interpretation and sense of obligation to his Hippocratic oath; and, by a desire to leave a heritage of ideals to his son. What greater and nobler motives could actuate one, than paternal and filial instincts? the duty of the parent to the son, and that of the disciple of the Hippocratic guild?

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*Lecture to Medical Students, Louisiana State University, Medical Center

Percival quotes Lord Bacon, as follows:

"I hold every man a debtor to his profession, so ought they of duty to endeavor themselves to be a help and ornament there unto."

"This is performed is some degree by the honest and liberal practice of a profession when men shall carry a respect not to descend into any course that is corrupt and unworthy thereto."

Continuing, Persival says:

"To a young physician it is of great importance to have clear and definite ideas of the ends of the profession; of the means for their attainment, and of the comparative value and dignity of each. Wealth, rank, and independence, with all the benefits resulting from them, are the primary ends which he holds in view, and they are interesting, wise and valuable. But, knowlege. benevolence, and active virtue, the means to be adopted in their acquisition, are of still higher estimation."

"Let both the physician and surgeon never forget that their positions are public trusts."

In every word there is evidence of emphasis laid by Percival on the necessity for the appreciation of one's obligation to his profession to be absolutely honest in his contacts with the public.

In 1847. at the time of the organization of the American Medical Association, a Code of Ethics, based largely on Percival's Ethics. was adopted. This has been added to and amended from time to time.

In 1903. the American Medical Association at a meeting in New Orleans, made certain alterations in "The principles in Medical Ethics."

In Section IV under the Title "Fee Bills", we find:

"Giving or receiving of commissions condemned. It is derogatory to professional character for physicians to pay, or offer to pay commissions to any person whatsoever.

"It is equally derogatory to professional character for physicians to solicit or to receive such commissions.

In Section III—under the Title "Secret Division of Fees Condemned":

"It is detrimental to the public good and degrading to the profession, and therefore unprofessional, to give or to receive a commission.

"It is also unprofessional to divide a fee for medical advice or surgical treatment, unless the patient or his next friend is fully informed as to the terms of transaction."

In the first decade of the twentieth century, the division of professional fees secretly became such a widespread disgrace that the public press, medical societies, and individual pioneers for the right raised their voice against it. It became such a dangerous hydra-headed monster, that it was necessary for a newly organized surgical association, the American College of Surgeons, to make it an absolute tenet that anyone aspiring to membership should sign a pledge that he would not be a party to this vulgar practice.

In order to appreciate the attitude of the profession toward the dishonorable practice of fee-splitting it is necessary to quote from the writings of those who have taken an active part in the campaign against it.

Matthew D. Mann, of Buffalo, New York, says:

"The medical professional is noble if we choose to make it so, but may become one of the most degrading and degraded occupations in which a man may engage when practiced for a low and mercenary motive.

"The most degrading and likely to be followed by disastrous consequences is a practice which has sprung up within recent times of secret dividing of fees.

"So far has this gone, that surgeons seek to get operations by open competition in the percentage of fees offered the doctor, and doctors hawk their patients around, looking for the surgeon who will give them the largest percentage of the fee, who will in other words give them a bribe.

"Of course, this is all done on the quiet as is usual with bribery."

In considering the effects of fee splitting, Mann discusses the subject under several heads:

(1) the young practitioner, (2) the patient and (3) the public.

"It is well to consider what effect such a false system of ethics may have on the beginners in the profession.

"The young man approached will either reject the proffered bribe with scorn, or else will allow the influence to have its expected effect. If poor, he may resist for a while, but, under the stress of poverty and want, gives in and becomes a grafter, like others he knows.

It is a great temptation to put in a young man's way.

"EFFECT ON THE PATIENT

"By this plan the doctors conspire to operate on him needlessly and to rob him. He gets poor surgical service, because the less skillful and the less experienced the surgeon, the more he needs patients, and the larger percentage he will pay."

"EFFECT ON THE GENERAL PUBLIC

"Loss of respect for the profession when these facts—and they are facts—*become known."*

J. P. Lord, in his presidential address before the Western Surgical Association, at its meeting held in Minneapolis, (published Transactions Western Surgical Association for 1910) states: "The practice of fee-dividing, secret division, joint fees, commissions, so-called dichotomy, graft, and possibly obtaining money under false pretenses, is increasing at an alarming rate, especially among the younger element, and that in many cities and towns it is the usual thing.

"The road is short and direct to the practice of graft.

"The primary object of fee-splitting is to get business. It is unfair competition.

"Fee splitters are usually underbidders; they lack sincerity; they are dishonest; they do not stop at dividing with doctors, hotel clerks, hack-men, new agents, barkeepers, ordinary clerks, traveling men, medical students, priests and preachers—all are represented, though few of the latter classes stoop to this practice.

"All classes who do this will lie and will not stop at willful misrepresentation of men of high character and standing.

"Doctors go lower and lower who become infected with this vice, and their penchant for easy money becomes their undoing."

"A doctor that grafts at all is dishonest, unethical, will lie, and go out of his way to profit by means of gain. I have had them intercept my patients upon railway trains and divert them after their family doctor had directed them to me; and hack-drivers representing them have undertaken to deliver my patients to grafting surgeons.

"Any practice which even smacks of graft or of obtaining money under false pretenses cannot endure before a righteous public opinion."

Theodore A. McGraw, Detroit, Michigan.:

"Every man who pays a bill, whether for goods or for service, has the right to know exactly what he is paying for, and it is the duty of the medical practitioner so to conduct his business relations with his patient, as to warrant their full exposure, in all their details, whenever it might be demanded.

"When choosing a surgeon for an operation, honesty requires that he make his choice with sole regard to the patient's interests and that he should never accept a bribe, which could possibly influence his action and make him fail in this evident duty.

"The custom of dividing fees leads to dishonest practices that are repugnant to every high-minded physician.

"Money so gained is acquired under false pretenses. If the transactions could be brought into court, no judge could pronounce them other than fraudulent. No honest man can afford to put himself in such a position, nor can the medical profession afford to condone such practices by its silence."

W. P. Manton, Detroit, Michigan:

"The matter of fee splitting is purely one of ethics and morals.

"If the reasons advanced for this practice are analysed it will probably be found that they are resolved into three distinct motives, cowardice, avarice, and graft, each one of which enters to a great or less degree into transaction of this kind."

John B. Murphy, when president of the American Medical Association 1911, in his presidential address, stated:

"There is a common, insidious and deadly parasite eating at the root of public medical confidence, and that is the practice of medical fee division, commission paying and the sale and purchase of patients.

We should see to it that no man of our profession barters to the highest bidder in commission and fee divisions. He who offers or gives is morally as guilty as he who requests or receives, and no sophistries should be accepted in justification of this atrocious practice."

As a remedy for the evils of fee splitting, Murphy stated that the profession as a whole must assume the responsibility for regulating the acts of its own members:

"And if necessary request the legislative bodies of this great land to place on the statute books, acts penalizing violation of professional trusts by doctors in and of this organization."

The fee splitting curse became so flagrant in certain states that statutes actually were passed among the laws of the various states.

The Legislature of North Dakota passed a bill to the effect: "that a surgeon could not perform an operation without first giving notice to the clerk of the court of the county in which he lived, and having two other physicians examine the patient to see whether the operation was necessary, and not only this, but whatever was removed from the patient had to be deposited with the clerk of the court and kept as a record for future reference."

According to R. S. Hill, president of the Alabama Medical Society in 1914:

"This was done to prevent unnecessary operations to which secret fee splitting, the trafficking in human lives and infirmities tend."

It is true that the governor of North Dakota vetoed the measure and prevented it from becoming a law.

In Tennessee, there is a law in the Code of Tennessee, against fee splitting. S. H. Hodge, of Knoxville, Tennessee, in discussing fee splitting in various forms, stated:

"It is the most infamous and malignant disease that could possibly seize any profession of self respecting men."

The law in Tennessee with reference to fee splitting is quoted in part from Hodge's paper. Of fee splitting doctors Hodge says:

"In the hands of such men the well being of the patient is a minor consideration. His money is being filched from him and in order to do this some kind of operation must be done.

"Fee splitting is beneath the dignity of self respecting men.

"Time was when the name of doctor meant a man whom the laity could trust, a man of integrity and honor, a character to be emulated, and a man that could be trusted with your reputation, your money, and even your life.

"Allow me to say that there are men in this profession who are betraying this confidence and this trust. They are disgracing the name of doctor.

"Your honor is being assailed and the banner of the profession to which you are devoting your life is being dragged in the mire."

J. M. T. Finney, of Baltimore, the first president of the American College of Surgeons, in his presidential address stated:

"The aim of this new organization and the reason for its existence lies in its disinterested and unselfish efforts to elevate the standards of the profession, moral as well as intellectual, to foster research, to educate the public up to the idea that there is a difference between the honest, conscientious, well-trained surgeons and the purely commercial operator, the charlatan and the quack."

The Biblical injunction to:

"Train up a child in the way he should go and when he is old he will not depart from it,"has given ample evidence of its truthfulness and practice, and of its wisdom as a general policy and rule of action. It is generally admitted, I believe, that the present waive of laxed morals in public, private and professional relations of life can on the one hand be placed directly to lack of early home training, and the other to a lowered moral tone in the professional schools and colleges. The conception and formation of the American College of Surgeons is simply a bona fide effort upon the part of the profession to cleanse its escutcheon of some of the dark blots of which it is stained. Of these, one of the foulest is the demoralizing practice of fee splitting. Finney calls it: "a hydraheaded monster, insidious and pernicious.

"We must set the pace, we must sound the key-note in this campaign of professional righteousness.'

"Unless one's ideals are the highest, one's efforts in this direction are foredoomed to failure.

"Character and efficiency of service are our battle cry."

Of the fee splitters, Finney says:

"There are those whose ethics are so low as to permit them in one way or another to barter away their professional honor for pecuniary gain or temporary prestige; whose morals are so debased as to allow them to make use of their professional relations, sacred and inviolate as they should ever be, as a means of gratifying their lust, or otherwise furthering their own base purpose.

"The character of such as these is ever inevitably reflected in their work.

"Thoroughness and conscientiousness are not the result of an intellectual process, but spring from character, that which makes a man what he is, that which lifts him above the common herd, that which stamps his work as extraordinary, must ever be a sine qua non for membership in this college."

Dr. Rudolph Matas in his classic essay, "The Soul of the Surgeon," 1915, stated with reference to fee splitting:

"It is disgracing the profession and puts it on a level with the broker and other tradesmen. The man who makes a custom of paying commission has the effrontery of the confidence man, the skill of the pick-pocket, the conscience of a bank burglar."

He further says:

"Fee splitters and bogus surgeons, who, under the cloak of an honorable profession, are nothing but a band of looters and outlawed camp followers."

Matas speaks of fee splitters as "rapacious, unscrupulous crooks, who, working in collusion, are ever ready to exploit the unsuspecting who have been skillfully steered to their operating room."

The Fellowship pledge of the American College of Surgeons in part says:

"I will not so long as I am a fellow of the American College of Surgeons, practice division of fees in any form; neither by collecting fees from others referring patients to me, nor by permitting them to collect my fees for me; nor will I make joint fees with physicians or surgeons who send patients to me for operation or consultation; neither will I in any way directly or indirectly compensate any one referring patients to me; nor will I utilize any man as an assistant as a subterfuge for this purpose."

J. A. Cahill in 1931, stated:

"If fee splitting were permitted, two things would follow: (1) unnecessary operations would be performed, and (2) the surgeon would in most instances not be the desirable one best fitted, but the one who payed the largest commission.

"It is a dangerous vice and hits at the very moral fiber of our medical standards. The remedy for this commercialism is education."

In the foregoing pages I have tried to present to you some of the basic standards of ethical action and I have included statements from leaders with reference to this vile practice of bartering patients.

I will now give some facts about it and conclude with personal attitudes toward this indefensible monstrous violation of public and professional trust.

Fee splitting or division of fees can be practiced in so many ways that it is difficult to do more than briefly outline some of the more evident methods.

I am sure that those who practice this underhanded, illegitimate method of dealing know many more subterfuges than I can possibly outline.

(1) Division of fees with a layman who acts as a barker for a doctor. This was a custom once in vogue in some of the resorts where the water was supposed to have certain healing properties. It was not infrequently found that fellow travelers accosted people on the train to find out where they were going and in a perfectly innocent way, would say, "Well if you are going to such and such a place, and are in need for medical attention I know Dr. So-in-so who is a very good man." In this way many patients were directed to a particular doctor. It goes without saying, that those who did the directing were on the train purposely, and were being paid for their services, to say the least a despicable method.

(2) Division of fees where the doctor obtains the fee for giving testimonials as to the efficiency of drugs or resorts.

(3) Where the doctors obtain rebates from a surgical supply company for advocating trusses, corsets, and other mechanical devises which these surgical supply houses have for sale.

(4) Where the oculist obtains a rebate from the optician who fills his prescriptions.

(5) Division of fees with medical practitioners for referring patients.

Referring patients to a surgeon, in return for which the surgeon gives the practitioner a fee.

(6) Reciprocal reference of patients even though the other man is not well qualified, and one of the men realizes that the other is not qualified.

(7) Rendering one fee bill when the patient does not know how much each doctor is to receive.

It should be accepted as a moral fact that one is obligated to let his patient know exactly what he is to receive from the patient, and what everyone else connected with the case is to receive. There should not be any underhanded dealing by which any particular financial transaction connected with the individual's illness is concealed from the patient or his family.

Where fee splitting first reared its head is not known to me.

It is unlikely that division of fees or any other underhanded method of conduct within the profession could have existed prior to the days of "specialism." Highly competitive methods bordering on purely commercial or mercenary procedures must have been the result of the division of professional activities into the narrower group of specialists. Overcrowding of the profession, mercenary types of medical colleges and the entrance into the profession of individuals whose training, both educational and familial, was not such as to develop the highest attributes of character so necessary for the appreciation of the standards set by Hippocrates and the long line of ethical leaders, who would have died rather than have the escutcheon of the profession carry a blot upon it, are responsible for this pernicious habit.

Fee splitting is a misdemeanor, it is disloyalty, it is treasonable, and it is a conspiracy to defeat not only the cause of justice, but of human rights.

Some types may be said to be a misdemeanor—in the dictionary we find the definition of misdemeanor: "a fault or transgression, ill conduct; a crime of only moderate seriousness."

Disloyalty—definition: "false to duty, government, or friends."

Treasonable—definition: "betrayal of faith, falseness to any trust or pledge."

Fee splitting is a betrayal of the confidence imposed in one by the school which trained him and which gave him its certificate or diploma. It is a betrayal of trust, and a disloyalty as well as a treasonable act to the medical societies which accepted him, after he has received his license to practice medicine.

It is a betrayal of the trust that patients have in a man when they place in his hands the life and welfare of a member of their family.

Any secret dealing may well be called a dishonest act; if it were not so, then those who enter into the secret pacts for personal gain would not make a secret of their pact.

Fee splitting is a prostitution in every way of the profession which should be the loftiest of all human professions. Fee splitting is simply graft. Fee splitting is obtaining money under false pretenses.

Fee splitting is the bartering of the human body by soulless beings for gold.

It is a means utilized by unscrupulous doctors to obtain practice.

It is an absolute prostitution of the medical profession.

Let me remind you of Emerson's great epigram:

"Character is higher than intellect." That this is true no one will doubt—further, we might state, that intellect without character prostitutes opportunity. A surgeon without character is not worthy of the name. The appreciation of our moral responsibility is the first step in the line of duty to the prospective patient.

The professional man owes obligations to ancestors, his immediate family, the profession which recognizes him, and the public which trusts him.

The name which one bears should be a sacred heritage to everyone of us. It is our duty to carry unsoiled the banner of our forefathers, thus showing the effect of our appreciation of training and family loyalty. No man wishes to bring disgrace upon parents or the children whom it is his privilege to guide.

No man should by any act bring disgrace upon the profession which has given him an opportunity to render service. No profession has nobler ideals than the medical profession. To carry these ideals into one's daily life is our duty. Public confidence in a group is often shaken by the acts of a few. Public confidence in the profession should not be shaken by the acts of any. To be true to the medical professional one's every act should be so performed that no reflection derogatory to the good name of his profession might result.

Let every one of us remember:

"A good name is rather to be chosen than great riches."

Dyspnea*

JOHN S. HARTER, M.D.
From the Department of Surgery, Mississippi State Sanatorium
SANATORIUM, MISS.

DYSPNEA, which literally means difficult breathing, is a symptom which brings many patients to the doctor for relief. Heart disease in the minds of the laity is the cause of difficult breathing. Most types of dyspnea can be relieved by the doctor if a correct diagnosis is made and the correct treatment instituted.

A review of the physiology of respiration and the circulation of the blood would be desirable, but that is not within the scope of this paper.

The causes of dyspnea may be classified as follows:

1. Prevention of adequate oxygenation of the blood in the lungs. This is called anoxia of the anoxic type.[1] This may result from (a) pulmonary disease or obstruction to respiration, or (b) low oxygen tension in the inspired air.
2. Interference with the transport of the respiratory gases by (a) circulatory failure, which is anoxia of the stagnant type, and (b) anemia, which causes anoxia of the anemic type.
3. Restriction of the action of the diaphragm or intercostals.
4. Increased metabolism.
5. Acidosis, reduced alkali reserve or retention of carbon dioxide.
6. Nervous conditions, e.g., emotional disturbance, neurasthenia, hysteria, encephalitis or direct stimulation of the respiratory center by cerebral tumor, hemorrhage or edema.

DYSPNEA DUE TO PULMONARY DISEASE

Oxygen want and carbon dioxide retention—Oxygen deficiency in the arterial blood stimulates the chemoreceptors of the carotid sinus and probably the aortic arch.[2] Nerve impulses are sent to the respiratory center. Dyspnea due to anoxemia is due to this reflex.

An increase in carbon dioxide stimulates the respiratory center directly due to a rise in the hydrogen ion concentration and probably alters the balance of potassium and calcium ions in the fluid bathing the cells of the center. An increase of the calcium ions stimulates the center and an increase of potassium ions depresses the center.[3]

Laryngeal and tracheal obstructions are obviously causes of dyspnea as frequently seen in diphtheria and foreign bodies in the trachea. Complete obstruction of the right or left bronchus or one lobe bronchus will cause dyspnea for a time. The respiration will in time become normal even though the obstruction remains, unless pneumonia occurs. The respiration becomes normal as atelectasis occurs. due to the decrease of circulation through the atelectatic lung. If sufficient blood circulates through an unaerated lung, the arterial blood contains too much carbon dioxide and less than the normal amount of oxygen. Chronic atelectasis of one lobe does not even cause abnormal dyspnea on exertion due to the lack of pulmonary circulation through the collapsed lung. Postoperative atelectasis is a common cause of dyspnea in the postoperative patient. Dyspnea does not occur in pneumothorax therapy of tuberculosis due to the decrease of circulation through the collapsed lung. If both lungs are collapsed to the point where there is insufficient functioning lung to aerate, the blood dyspnea occurs due to anoxemia but not carbon dioxide retention.

Asthma is a common cause of dyspnea. Here spasm of the smooth muscles of the finer bronchioles along with edema of the bronchiolar mucosa causes poor ventilation of the alveoli. Oxygen deficiency and carbon dioxide accumulation occurs in the arterial blood. Cyanosis develops. Adrenalin or ephedrine acts by inhibiting the bronchiolar muscle during the attack.

Pneumonia produces anoxemia by the passage of blood through unaerated portions of the lung and by shallow breathing. When the pneumonic area passes into the stage of gray hepatization, the vessels of the affected lobe become obliterated to a large extent and dyspnea disappears, although there are still signs of pneumonia by physical and roentgen examination of the chest.

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Bronchopneumonia causes dyspnea by the same mechanism as in lobar pneumonia. If bronchopneumonia areas co-exist with lobar pneumonia the dyspnea may not disappear when the stage of gray hepatization occurs in the affected lobe[4].

Increased sensitivity of the Herring-Breuer reflex—Through afferent vagal fibers inflation and deflation of the lungs as well as the rate and depth of breathing is controlled. Ascending vagal impulses arrest inspiration and so bring on expiration; cessation of these impulses during deflation of the lungs results in the arrest of expiration and permits inspiration[5]. This is the Herring-Breuer reflex.

Cardiac Dyspnea—In certain chronic heart lesions the patient develops dyspnea on exertion. Stimulation of the respiratory center by oxygen want or carbon dioxide excess is not in the absence of cardiac failure responsible for the dyspnea since both the oxygen and carbon dioxide content of the arterial blood may be normal. The prime cause of dyspnea is pulmonary engorgement leading to diminished distensibility or increased stiffness of the lung[6]. Though the reduction in vital capacity is roughly proportional to the dyspnea, the two do not bear the relationship of cause and effect, since the subject's vital capacity is always greater than the volume of air required for the exertion which causes the dyspnea. A greater inspiratory effort is expended in breathing the extra volume of air due to the increased stiffness of the lung which also causes the patient to expire forcefully in order to collapse the lung. The intrapleural pressure becomes positive near the end of expiration instead of remaining negative[7]. The increased stiffness of the lung in itself reduces the vital capacity as well as causes the dyspnea through the Herring-Breuer reflex.

In congestive heart failure there is added to the increased stiffness of the lung oxygen lack and carbon dioxide excess, but this is of minor importance[7]. Exudate in the alveoli and edema of the alveolar walls does not interfere with the elimination of carbon dioxide but arterial anoxemia may be present. Unequal ventilation of the lung occurs as in emphysema and is probably the cause of the anoxemia.

The high venous pressure in the right side of the heart may cause stimulation of the respiratory center and this may be an important cause of the dyspnea in heart failure[8].

Patients with orthopnea are relieved of dyspnea in the sitting position due to better drainage of blood from the chest and hence the relief of pulmonary congestion which in turn decreases the stiffness of the lungs. The vital capacity is less in the recumbent position than in the sitting position in the normal as well as in the cardiac patient.

Cardiac asthma is probably due to pulmonary congestion and a sudden increase of pulmonary stiffness. During an attack there is engorgement of the pulmonary vascular bed, a tendency to pulmonary edema and a marked reduction in the oxygen saturation of the arterial blood[9].

Limitation of motion of the intercostals and diaphragm—In emphysema the chest is at almost maximum expansion. The chest is barrel shaped, the ribs elevated and the diaphragm depressed. The chest rests in the position of almost maximum inspiration. The residual air may be two to three times normal. The tidal air is normal or only slightly decreased. The vital capacity is decreased from 20 to 60 per cent. Owing to the loss of elasticity of the lungs, expiration is accomplished by the forceful contraction of the expiratory muscles. The expiratory phase is prolonged to squeeze the air out of the lungs. Dyspnea occurs on exertion due to the lack of any pulmonary reserve.

There are anoxemia and retention of carbon dioxide in emphysema due to impaired gaseous exchange. As a result of the loss of elasticity the intrathoracic pressure is not evenly distributed throughout the lung. The peripheral alveoli are ventilated more than the more normal central alveoli. The vessels of the peripheral alveoli are obliterated, so they are functionless. The functioning alveoli being poorly ventilated, gaseous exchange between alveoli and bronchi is carried on by diffusion instead of the normal mixing of gases[6]. There is a compensatory rise in the bicarbonate of the blood. The respiratory center becomes rather insensitive to carbon dioxide retention[11]. An emphysematous person can breathe a mixture of carbon dioxide and oxygen with little change in respiration that causes a normal person extreme dyspnea. Apparently the carotid body also becomes used to the anoxemia.

In pulmonary fibrosis there is an increase of pulmonary stiffness with a resultant increased sensitivity of the Herring-Breuer reflex. There is also anoxemia and retention of carbon dioxide by the same mechanism as in emphysema.

The dyspnea in emphysema can frequently be decreased by elevating the diaphragm by the use of an abdominal binder. The abdominal binder is not effective in pulmonary fibrosis, as the increased sensitivity of the Herring-Breuer reflex is mainly responsible for the dyspnea.

Interference With the Transport of Respiratory Gases

Dyspnea in anemia —As a rule dyspnea in anemia occurs only with exertion. The circulatory rate is increased so that the venous blood is not completely reduced and more oxygen is delivered to the tissues than if the circulatory rate were normal. The circulating volume of blood is redistributed, as can be observed in the construction of the skin vessels. These mechanisms make it possible for the patient to be comfortable at rest. A limited exertion may be more than the increased circulatory rate and redistribution of circulation can compensate for. Thus oxygen deficit occurs and dyspnea ensues through the carotid body reflex. The lack of hemoglobin also interferes with the transport of carbon dioxide.

Dyspnea due to increased metabolism —Muscular exercise is the main cause for increased metabolism. The large amounts of lactic acid formed raise the hydrogen ion concentration of the blood and hence cause dyspnea. The metabolism must be increased about 300 per cent to cause dyspnea, hence hyperthyroidism is not capable of causing dyspnea in the presence of a normal cardiorespiratory mechanism. Moderate exercise plus hyperthyroidism may raise the metabolism above 300 per cent and thus cause dyspnea at a low level of exercise. The decreased vital capacity in hyperthyroidism may also lower the level of exercise which causes dyspnea.

Dyspnea due to acidosis —Acidosis due to diabetes, nephritis or muscular exercise seldom can produce dyspnea. The carbon dioxide combining power of the blood must be reduced from a normal of 53 vol per cent to 12 vol per cent to produce dyspnea[10]. Hyperpnea may of course appear in mild degrees of acidosis. Dyspnea on exertion may occur due to the hyperpnea of the exercise being added to the hyperpnea of the acidosis. The nonvolatile acids in diabetes, muscular exercise, and nephritis react with the bicarbonate of the blood preventing acidosis. The alkali reserve is reduced but the ratio of one of carbonic acid to twenty of sodium acid carbonate is maintained through the stimulating effect of the hydrogen ion upon the respirations. The hyperpnea reduces the carbon dioxide tension of the blood.

Cheyne-Stokes respiration is probably due to depression of the respiratory center by lack of oxygen. The depressed condition of the center results in shallow respirations which intensify the oxygen deficit. The increased lack of oxygen increases its sensitivity to carbon dioxide[12]. The respirations increase, but subside as the carbon dioxide is eliminated. The carbon dioxide tension in the blood is reduced below the level at which the center is stimulated and apnea ensues. Oxygen therapy may return the patient to normal respirations.

Periodic breathing in cases of increased intracranial pressure is probably due to changes in blood pressure. When the arterial pressure is above the intracranial pressure the patient breathes, and when the blood pressure is below the intracranial pressure the anemia of the respiratory center depresses its activity[13].

BIBLIOGRAPHY

1. Barcroft, J. and associates. Phil. Trans. Roy Soc., 1923, B211, 351.

2. Hymans, C. and associates. Compt. med. Soc. biol., 1931, 106, 54. New Eng. J. Med., 1938, 219, 157.

3. Hooper, D. R. and associates. Am. J. Physiol., 1917, 43, 351.

4. Best, C. H. and Taylor, N. B. The Physiological Basis of Medical Practice, Baltimore, 1940.

5. Adrian, E. D. and Bronk, D. W. J. Physiol., 1928, 66, 81.

6. Christie, R. V. J. Clin. Invest., 1934, 13, 295. Quart. J. Med., 1938, 7, 421.

7. Christie, R. V. and Meakins, J. J. Clin. Invest., 1934, 13, 323.

8. Harrison, T. R. and associates. Arch. Int. Med., 1932, 50, 690. J. Clin. Invest., 1932, 11, 133.

9. Weiss, S. and Robb, G. P. J. Am. Med. Assoc., 1933, 100, 1841.

10. Means, J. H. Medicine, 1924, 3, 309.

11. Scott, R. W. Arch. Int. Med., 1920, 26, 545.

12. Douglas, C. G. and Haldane, J. S. J. Physiol., 1909, 38, 401.

13. Eyster, J. A. J. Exp. Med., 1906, 8, 565.

The Medical Service of a Large Military Training Camp*

GEORGE E. LEONE, M.D. and BUFORD WORD, M.D.
CAMP SHELBY, MISS.

THE SURGEON General of the U. S. Army[1], speaking in Memphis a few months ago, estimated that 6,500 doctors will be needed for each 1,000,000 soldiers. It is obvious that as the present National Defense Program goes forward the services of 9,100 medical officers will be needed to render medical service to the 1,400,000 soldiers in training by July 1, 1941. About 75% of this number will be drawn from civilian practice as the Regular Army has only 1,230 medical officers and the National Guard has only 1,115 medical officers.

Since a greater part of the professional medical care rendered the soldiers in the different camps throughout the country is being rendered by civilian practitioners who have been called into the service, we feel that to acquaint you in a general way with the organization that these "civilian practitioners" help compose will justify this communication. As the Selective Service Act is daily increasing the population at the various camps, so is the volume of medical care increasing proportionately. The population of Camp Shelby has grown steadily for the past seven months and so has the patient population of our hospital. The patient population of the hospital has been slightly less than 3% of the camp population since the opening of the institution.

The fundamental objectives of the Medical Department of a large military training camp are (1) to reject individuals unfit for military service, (2) preserve the health and prevent disease among personnel subject to military control, and (3) render medical, surgical and dental care to the sick and injured.

All of the larger camps have a board of medical officers who examine every selectee thoroughly before he is inducted into the service. It is the duty of this board to reject those individuals that are unable to do full military duty.

The February, 1941, report of the Induction Station shows that 1,836 all white selectees were examined at Camp Shelby and that 30.5% were found unfit for service. Table 1 lists the most common causes for rejection and the percentage of occurrence of each deformity in the number examined. There were 568 rejections or 30.5%.

TABLE[2] 1

(1)	Flat Feet	241	45.9%
(2)	Hemorrhoids	36	6.3%
(3)	Defective Vision	28	4.9%
(4)	Hernia	25	4.4%
(5)	Insufficient Teeth	23	4.0%
(6)	Under Weight	22	3.8%
(7)	Varicocele	16	2.9%
(8)	Ear Defects	11	1.9%
(9)	Pilonidal Cyst	9	1.7%
(10)	Varicose Vein	9	1.7%

Of course no definite conclusion can be drawn from the data in one monthly report; nevertheless, this report will give anyone making examinations of selectees some conditions that are causes for rejection and should be ruled out on every selectee examined. Although 30.5 is a high percentage for rejection and will probably be much lower when a larger series is compiled, this figure compares favorably with those found by Leone[3] in studying the records of 6,743 volunteers for the Regular Army before the Selective Service Act becomes effective.

To preserve the health and prevent disease among personnel subject to military control, the camp has a Department of Sanitation headed by the Sanitary Inspector, whose duty it is to keep a constant eye on the health of the camp. All types of communicable diseases are tabulated and carefully checked by the Sanitary Inspector with the hope of preventing another epidemic in some instances and removing the source of infection in others.

Water supply, cleanliness of the kitchens, disposal of the waste of the camp areas where disease-carrying insects might breed are some of the problems that are daily routine with this department.

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*Read before the Section on Surgery at the seventy-fourth annual session of the Mississippi State Medical Association, Biloxi, May 13-15, 1941.

**This paper in no way represents the opinion of the Office of the Surgeon General.

The medical, surgical and dental care of the sick and injured is done in the regimental dispensaries and the Station Hospital. Each regiment out in the camp has a regimental dispensary where four to six doctors are on duty. Minor injuries and illness of less than twenty-four hours' duration are handled there. If the injury is serious or it is obvious that the illness will require detailed study, the patient is properly tagged and referred to the Station Hospital where he is received, re-examined, and admitted to a ward for that particular type of illness or injury.

The Station Hospital here at Camp Shelby, which is similar to most of the station hospitals at the larger camps, has a 2,000 bed capacity and covers 80 acres. All of the buildings are connected by corridors and for all practical purposes are under one roof. We have at present about a hundred doctors, fourteen dentists and twelve administrative officers on duty here at the hospital. The Commanding Officer of the hospital is responsible for its proper function. He is in charge of all of the officers, nurses, enlisted men and civilian employees assigned to duty here. To look after the professional care of the patients, the Commander divides the responsibility between the Chief of the Surgical Service and the Chief of the Medical Service, and then assigns the doctors as they report for duty to the chief of each service. The new officer is then assigned to duty in that service where he is best qualified, taking into consideration the needs of the service.

The Surgical Service is divided into the following sections:

1. General Surgery.
2. Anesthesia and Operating Section
3. Orthopedic Surgery
4. X-ray
5. E.E.N.T.
6. Genito-urinary
7. Physiotherapy
8. Septic Surgery.

Each section has a chief, under whose direction an adequate number of medical officers work to carry on the function of the department.

The Medical Service is divided into the following sections:

1. General Medicine
2. Cardiovascular Diseases
3. Infectious Diseases
4. Common Respiratory Diseases
5. Gastro-enterology
6. Neuropsychiatry
7. Receiving Office.

As in surgery, a chief of section heads each department with aids necessary to carry on the work required.

The above is only a brief classification of the organization of the professional side of the hospital. There are many other departments which will only be mentioned here: the Laboratory, Dental Service, Medical Supply, Medical Detachment, and Registrar's Office. All of these departments are independent of the Medical and Surgical services, but do operate under the direction of the commander and perform a very important function in the organization and operation of a large hospital. The hospital furnishes the medical officers for the Induction Board here at Camp Shelby and also the Reception Center, although both institutions function independently and have no connection with the hospital.

The first patients admitted to this hospital in October, 1940, were housed in buildings appropriated for temporary use. The present structure was not ready to receive patients until about the middle of December, 1940. Since that date the work here in the hospital has increased very rapidly.

In order to give you some idea of the volume of work done, we will review briefly the report of the Surgical Service for April, 1941.

Major Operations	98
Anesthesia—General	110
Spinal, Nupercaine	73
Spinal, Novocaine	5
Ether, Open Drop	4
Intravenous Sodium Pentothal	10
Nitrous Oxide	2
Nitrous Oxide Ether	16
Blood Transfusions	11
Infusions	80
Fractures and Dislocations	35
Physiotherapy Treatment	563
X-ray Films Taken and Read	1975
Eye, Ear, Nose & Throat Operations	48
Cystoscopic Examinations	15

Of the major operations the greater number were performed for appendicitis, hernia, rectal cases, and occasionally for gunshot wounds and open reduction on fractures of the long bones. In our cases of acute appendicitis with rupture and generalized peritonitis, we have used much larger doses of sulfanilamide powder intra-abdominally than is recommended in the recent literature with no apparent ill affects to the patient. Blood sulfanilamide concentrations have been determined on the patients with variations as to sulfanilamide levels found. However, our series is too small to draw any definite conclusion at present. Thompson, Barbson and Walker[4] have described an excellent way of sterilizing the powder for this use. When sulfanilamide powder is autoclaved it becomes caked and lumpy and is difficult to handle. When placed in a test tube and baked in an oven for thirty minutes 120° C, it remains physically the same and is much more easily spread over the abdominal contents.

One will note from the anesthesia table that nupercaine has been used in the majority of instances. We have found it to be the agent of choice when spinal anesthesia is indicated and have experienced only one failure in upwards of 200 administrations of the drug.

SUMMARY

(1) The causes for rejection of 568 selectees examined at Camp Shelby, Mississippi in February, 1941 have been revised.

(2) The organization of the professional service of an Army Station Hospital has been briefly outlined.

(3) The volume of work that is being done at this hospital is suggested by the April report of the surgical service.

Station Hospital
Camp, Shelby, Mississippi

REFERENCES

1. Magee, James C. (Surgeon-General, U. S. Army). Medical Preparedness for the Present Emergency The Mississippi Doctor. 18:546-550 March 1941.
2. Data obtained from Capt. Milton S. Saslaw, Chief of Medical Induction. Camp Shelby, Mississippi. A complete study to be published.
3. Leon, George E. Causes for Rejection for Entrance into the Regular Army Due to Physical Defect. J.A.M.A. 115:1283-1284 Oct. 12, 1940.
4. Thompson, James E., Brabson, John A. and Walker, John M. The Intra-Abdominal Application of Sulfanilamide in Acute Appendicitis. Surg. Gyn. and Obs. 72:722-728 April, 1941.

British patriotism has been strikingly revealed by twenty-three months of the war with Germany and in two special ways. In the "Small Savings Campaign," British workers have taken from their weekly pay envelope the sum of four billion dollars to help win the war. The response in the campaign was never greater than in the days following Dunkirk and the Nazi poundings in the fall of 1940. The second instance was a contribution of one hundred thousand dollars salvaged by the melting down of the "jewels" of British Free Masons.

Sulfathiazole in the Treatment of Pneumonia*

TREATMENT OF PNEUMONIA AND THE COMPARATIVE VALUE OF SULFAPYRIDINE IN PNEUMONIA THERAPY

N. C. HOUSE, M. D.
BELZONI, MISSISSIPPI

THIS PAPER, concerning a brief discussion of pneumonia therapy, consists mostly of a review of recent literature as well as the comparative value of sulfapyridine and sulfathiazole, as has been reported by various men working with a large volume of patients. The author's experience has been too limited to arrive at any conclusion in regard to preference of either of the two drugs. The treatment of pneumococcic pneumonia has undergone marked changes in the past few years, and since 1938 we have seen a marked decline in the mortality rate of this dreaded disease due to advances in therapy. Although the utopia in the treatment of pneumonia has not yet been reached, recent advances have given us a much brighter outlook in the disease. With the introduction of concentrated and refined rabbit antiserum, which is now available for each known type of pneumococcus, and more recently, the use of chemotherapy in the forms of sulfapyridine and sulfathiazole, the mortality rate of pneumonia has been reduced from about 30-35 per cent to about 6-12 per cent.

There are definite indications for both serum and chemotherapy and one alone is at times insufficient for recovery. The action of the two agents is entirely different and the clinician must understand the mode of action of both.

The fundamental facts for the basis of serum therapy are beautifully stated by Bullowa: "In response to infection with pneumococci, antibodies of various kinds are produced by the patient, and, as a part of the healing mechanism, they unite with the antigen or capsular carbohydrate. These antibodies are specific for each type of pneumococcus. United with antibody, circulating carbohydrate is inactive. The blood usually is inhospitable to pneumococci when free antibody is present. Antibodies sensitize pneumococci so that they are either lysed or phagocytized and destroyed. Free carbohydrate makes the leucocytes antiphagocytic. Recovery occurs when more specific antibodies are present than the antigen or carbohydrate which induced their appearance. By the administration of serum, a favorable condition of the blood in respect to antibody is produced in a shortened time and healing is accelerated.

"Sulfapyridine and sulfathiazole produce favorable response by retarding the growth and multiplication of the pneumococcus. Recovery in any infectious diseases occurs only after the human body has elaborated through its antibody mechanism sufficient protective substances to combat and destroy the exciting bacterial agent in the disease. Sulfathiazole and sulfapyridine are effective by bacteriostasis, serum by increasing the effect of the immunity mechanism, but ultimate recovery ensues because the immunity mechanism of the body has neutralized the toxins and destroyed the bacteria. Specific serum improves the patient, sulfathiazole and sulfapyridine injure the bacteria."[1]

It is still imperative that the diagnosis of pneumococcic pneumonia be made as early as possible, as statistics prove very clearly the comparatively lower mortality rate in cases where therapy is instituted within the first few days of the disease. A carefully taken history and thorough physical examination are essential in such, and when it is possible, a chest film should be made, as such will often reveal the diagnosis in doubtful cases. Laboratory procedures should require:

(1) That sputum be typed at the earliest practical hour as serum therapy is impossible without the knowledge of the known type of pneumococcus.

(2) That blood examinations include red blood cell count, hemoglobin, white blood cell count and differential. This is particularly im-

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portant when the patient is given either form of chemotherapy and it is advisable to repeat such about very four days while under treatment.

(3) That a blood culture be made to determine the presence or absence of bacteremia, especially when considering whether or not to use serum. This is also a valuable aid in prognosis.

(4) Urinalysis should be made during the initial laboratory procedures and repeated as indicated.

It seems to be present-day consensus of opinion that sulfapyridine or sulfathiazole be given as follows: oral administration of two grams of the drug when the diagnosis is made, repeating the dose in four hours and one gram of the drug thereafter every four hours until the temperature is normal for 48 hours and there is a satisfactory clinical response in the patient. Of course this dosage is variable depending on the age and size of the patient. The only contraindications for the drug are those conditions to which known reactions to drug therapy with sulfanilamide, sulfathiazole, or sulfapyridine have occurred. These include anemia, skin rashes, G. U. disturbances and possibly other toxic reactions. Intravenous administration of sodium sulfapyridine may be used in cases of extremely ill patients where excessive nausea prohibits oral administration, or in any patient unable to swallow the drug, and in pneumococcic meningitis.

According to Reddie, serum is recommended in conjunction with chemotherapy in the following situations:

1) when the patient is over fifty years old, 2) when bacteremia is present, 3) when a major complicating disease is present, 4) when patient is severely ill from onset and shows no improvement after twenty-four hours of chemotherapy, 5) when treatment is begun late in the disease, 6) when a major toxic effect of sulfapyridine or sulfathiazole prohibits further administration.[2]

In serum therapy there are certain features which should be considered before its administration. A careful investigation as to any allergic possessions of the patient such as asthma, hay fever, or previous reactions to serum is advisable, and either skin or intradermal test should precede serum therapy. Dosage may be variable depending on one or more of the following factors:

1) Type of organism—Serum is less effective in Type II than in Type I infections, and the dose should be doubled in Type II cases. 2) Age of the patient—Smaller doses suffice in children, but the dose must be increased with increasing age. 3) Presence or absence of bacteremia—Dosage of serum should be doubled in cases with a positive blood culture. 4) Number of lobes involved—More serum must be given as the extent of lung tissue involved increases. 5) Duration of the disease—The earlier in the disease that treatment is instituted, the smaller the dose or the more effective the serum given. Formerly a duration of illness for more than four days was considered a contraindication of serum therapy but it is now thought that it is of benefit. 6) Rapidity with which serum is administered—A dose of 100,000 units given within a period of two to four hours is more effective than the same dose given in divided doses every six or eight hours. 7) Presence of complications—Purulent or systemic complications require more serum.

TECHNIQUE OF TREATMENT

One to two cc. of the warmed serum is given intravenously very slowly, at the rate of one cc. per minute. In the absence of a reaction sufficient to contraindicate further serum, the dose of serum is given.

This may be given by two plans:

1) The usual plan is to give an initial dose of 20,000 units. Two hours later a second dose of 20,000, 40,000 or 60,000 units may be given, and repeated at frequent intervals of from two to four hours until the total contemplated dosage is given. It should all be given in as short a time as possible, 24 hours at most.

2) The contemplated dose may all be given at one time, the dosage being estimated from previous experience. By giving concentrated and refined rabbit serum as a single dose at the rate of one cc. per minute, Volini and Levitt decreased the incidence of thermal reactions from 28 per cent to 8 per cent.

The serum may be given undiluted, but it is recommended that it be diluted with normal saline or 5 per cent glucose solution, in a drip set. allowing the saline solution to run in first, adding the serum to the flask, and after the serum has run in, to follow it with about 50 cc. more of saline. A syringe filled with adrenalin 1-1000 should be available at all times for immediate use in case of reaction, and the physician should stay with the patient during and for an hour after the administration of the serum.

In regard to the therapeutic comparative value of sulfapyridine and sulfathiazole. Flippin. Harrison, Schwartz, Leon and Rouse, and Brandt, at Philadelphia General Hospital, made the following report in May, 1940:

"Sulfathiazole was given to one hundred patients with typical pneumococcal pneumonia and a comparable series of one hundred patients treated with sulfapyridine. Of the two hundred patients 19 (10 sulfathiazole, 9 sulfapyridine) received specific anti-pneumococcus serum in addition to chemotherapy. Sulfathiazole doses and sulfapyridine were alike, the dosage being that as previously stated in this paper. In both series the drugs were given until the temperature had been normal for forty-eight hours along with evidence of clinical improvement. Serum, given after unsatisfactory response in twenty-four to thirty-six hours, in the 19 cases was given in initial dose of 100,000 units of undiluted serum intravenously followed by further serotherapy when necessary. Of the patients treated with sulfathiazole, 12 died. In the sulfapyridine group. 15 died. Patients who were moribund in both groups were included, although they did not provide a fair trial for either drug. Five such patients were treated with sulfathiazole, and four with sulfapyridine. If these cases were excluded the corrected mortality rate becomes 7.4 per cent and 11.4 per cent for the sulfathiazole and sulfapyridine groups, respectively. Thirteen patients with bacteria were treated with sulfathiazole, and four of these died. If the three with bacteremia dying within 24 hours are excluded, the corrected mortality rate for this subgroup is 10 per cent; in the sulfapyridine group, 6 of the 11 patients died, and if the three 24-hour cases are excluded. the corrected mortality rate becomes 37.5 per cent. In both therapeutic groups, the unusual incidence of Type III infection has probably raised the mortality. Treatment influenced the course of the disease thus: A critical drop in temperature occurred within 24 hours in 50 per cent of the patients treated with sulfathiazole. as compared with 65.8 per cent of the patients in the sulfapyridine group. At the end of forty-eight hours, 88.6 per cent of the patients receiving sulfathiazole showed a critical drop in temperature, compared with 95 per cent of the patients treated with sulfapyridine. The temperature fell to normal within 24 hours in only 6.8 per cent treated with sulfathiazole, and 21 per cent of the patients receiving sulfapyridine. Within 48 hours, normal temperature occurred in 45 per cent and 70.6 per cent of patients in the sulfathiazole and sulfapyridine groups, respectively. A secondary rise in temperature occurred in 18 patients, 6 with sulfathiazole, 6.8 per cent, 12 sulfapyridine, 14.1 per cent and these usually required additional drug therapy. In the 19 serum treated cases, 12 died.

The incidence of complications in both therapeutic groups was small and comparable, massive pleural effusion occurred in 3 patients with sulfathiazole and 2 patients with sulfapyridine. Empyema occurred one time in sulfathiazole and twice in sulfapyridine. Toxic reactions were noted. The most frequent effects of both drugs were nausea and vomiting, both symptoms usually occurring in the first 24 hours. Vomiting with sulfathiazole was much less severe and persistent. In four patients receiving sulfapyridine it was necessary to discontinue the drug on account of vomiting, and in no cases was it necessary in the sulfathiazole group. Their conclusions were as follows: Both sulfathiazole and sulfapyridine are effective, as shown by the corrected mortality rate of 7.4 per cent in the sulfathiazole group, as compared with a corrected mortality rate of 11.4 per cent in the sulfapyridine group. The previous three-year mortality rate without chemotherapy was 35 per cent.[2]

CONCLUSION

1. There has been a definite marked decline in the mortality rate of pneumococcic pneumonia in the past three or four years.
2. This decline has been due to the advances in therapy including serum and chemotherapy, and the two combined.
3. Sulfathiazole and sulfapyridine are both effective in causing direct injury to the pneumococcus, while serum increases the effect of immunity mechanism.
4. Sulfathiazole and sulfapyridine are equally effective in pneumococcic pneumonia, but sulfathiazole is definitely less toxic.
5. The combined use of serum and chemotherapy is the ideal treatment for pneumococcic pneumonia.

BIBLIOGRAPHY

1. Reddick. W. A. *Treatment of Pneumonia with Sulfamilamid, and Sulfapyridine, and Its Allied Compounds. Texas State Journal of Medicine.* 36;354 September. 1940.
2. Flippin, Hanson F.; Schwartz, Seon and Rose, S. Brandt. *The Comparative Effectiveness of and Toxicity of Sulfathiazole and Sulfapyridine in Pneumococcic Pneumonia. Annals of Internal Medicine.* 13:2038. May. 1940

Pyelitis in Children*

DR. CHARLES PATTERSON
ROSEDALE, MISS.

PYELITIS IS an inflammation of the pelvis of the kidney. It may be acute or chronic: primary or secondary: and may result from an extension of an infection from the kidney, but more commonly is the cause of inflammation extending into the medulla or cortex of the kidney.'

ETIOLOGY

The primary or actual cause of pyelitis is usually the result of bacterial invasion and multiplication within the pelvis of the kidney. There are many routes by which the organism reaches the kidneys. but I well mention only the three most common channels of invasion: the hematogenous or blood stream: the ascending, through the urethra. bladder and ureters; and the lymphatics situated along the ureters.

When the infection reaches the kidneys through the hematogenous route. there must be a focus of infection elsewhere in the body and the cocci are usually of the Gram positive type with the streptococci and staphylococci predominating. The ear. nose and throat furnish the greatest number of focal infections, followed by the respiratory system, then the skin. Infections from many diseases. such as scarlet fever, measles. chicken pox and typhoid reach the kidneys through this route. Infections transmitted through the blood stream usually infect both kidneys. while the ascending route and lymphatics more often involve one side.

The ascending route is the most common channel through which an infection reaches the pelvis of the kidney. This can be proved by the fact that the greatest number of cases is found in the female, and the colon bacillus. with its easy entrance from the vulva. is the predominating bacteria. In my experience the number of females treated has been about ninety per cent.

The lymphatics carry few infections to the pelvis of the kidney and these are usually from the intestinal tract following a diarrhoea or colitis.

The secondary or predisposing causes of pyelitis are those conditions interfering with the free flow of urine, causing a retention and stagnation in the pelvis of the kidney favoring bacterial growth and multiplication. The common obstructions are malformations, kinks or twists of the ureter, pressure from misplaced blood vessels or organs. stones, neoplasms, strictures and adherent labia majora. Many systemic diseases such as diabetes, anemia, influenza, malnutrition and tuberculosis lowers the resistance and predisposes to the growth of bacteria.

PATHOLOGY

In the acute or early stages of pyelitis the mucous membrane is congested. turbid. somewhat swollen and may show ecchymosis or grayish pseudo-membrane. There are spots of epethelial desquamation, leaving the surface rough and bereft of its normal polish.

If the infection extends over a period of time the inflammation becomes chronic with a thickening of the mucous membrane and ulceration of its surface. When an obstruction is great enough to check the flow of urine the pelvis of the kidney becomes dilated with a pouching of the sides and the formation of pockets which acts as a breeding place for bacteria, accounting for many delayed cures.

The bacteria commonly found are the typhoid, phenumococci, gonococci, streptococci, staphylococci and colon bacilli. The colon bacillus leads with 83.5 per cent of the total of pyelitis cases.

The symptoms differ according to the age of the patient and the cause of the disease. In the very young infant there is often a sudden rise of temperature, which continues for several days before receding to normal. These cases are caused by some congenital abnormality interfering with the free passage of urine, resulting in a mild pyelitis which is soon eliminated when the inner pelvic pressure becomes greater than the external obstructive force, thereby establishing free drainage.

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*Read before the Delta Medical Society at its thirty-sixth semi-annual meeting, October 9. 1940, Indianola, Miss.

In children under two years of age there is often a sudden collapse following the initial onset of fever. The face appears gray and drawn, the lips livid and the forehead pale. The pulse is rapid and weak, the respiration rapid, shallow and irregular. If convulsions occur, the condition is considered very grave. Within this group is often seen a normal healthy child who suddenly begins vomiting. Illustration: Female, age sixteen months, normal delivery and development. Illness began by a sudden onset of vomiting with no rise of temperature for several hours. The general appearance was that of a very sick child, difficult to arouse between periods of emesis, and seemingly in a semi-coma with both eyes and mouth open. On examination of the urine numerous clumps of pus were found and physical examination revealed the labia majora adherent over the urethral opening, not only interfering with the free flow of urine but acting as a receptacle, incubator and transmitter of bacteria. With this corrected and proper treatment administered, the recovery was rapid and uneventful.

In older children many very acute cases are associated with convulsions, rigidity of the neck, vomiting, diarrhoea and high temperature, while others may have severe pains in the region of the kidneys with only slight rise in temperature, and if urine is very acid it will cause local irritation, frequent urination and burning.

Many cases develop more gradually with intermittent spells of vomiting, slight diarrhoea and subnormal temperature, others will have intermittent chills and fever with no pus showing in the urine until the temperature has receded to normal.

DIAGNOSIS

Pyelitis, like many other diseases, is very confusing and difficult of a diagnosis. In the acute cases beginning with chills and fever many are mistaken for malaria, because at the usual time of the first examination the fever is at its highest peak and a specimen taken then may not show pus. This is caused by a temporary obstruction from the congestion and swelling of the mucous membrane in the pelvis of the kidney near the opening to the ureter. If the blood is negative for malaria and the patient shows a peculiar pallor of the skin with scanty acid urine, then another test should be made of the urine taken while the temperature is at its lowest level, which will then often show many clumps and scattered pus cells.

While in doubt never give quinine, because the results may be far more serious than Epsom salt in appendicitis.

Pyelitis on the right side is easily mistaken for appendicitis when there is pain, rigidity, nausea, vomiting, rapid pulse and a high blood count. In pyelitis the anterior pain extends to the thigh and inguinal region and the posterior to the kidney, also the rebound pain is not so great as in appendicitis. If upon repeated examinations of the urine clumps of pus are found, then pyelitis should be suspected.

Other diseases to be differentiated are typhoid, meningitis, influenza, bronchitis and pneumonia. These are eliminated by chemical and microscopial findings in the urine combined with any other physical tests deemed necessary.

COMPLICATIONS

There are very few cases of uncomplicated pyelitis and the most serious complications are those of the kidney, which often prove fatal. Chronic interstitial nephritis, sacculation of the kidney and hydronephrosis are caused by pyelitis following an obstruction to the flow of urine with no septic matter in the pelvis, but when pyogenic cocci are present there may be an acute or suppurative pyelonephritis which, if not relieved, will destroy the entire kidney substance, leaving a sac of pus with or without a thin shell of renal tissue. Many other conditions are often found in the kidney following neglected cases of pyelitis, such as pyonephrosis, renal carbuncle and sacculi containing grayish putty-like masses.

The bladder, acting as a storage tank for urine, is often infected by bacteria entering through both the ascending and the descending routes.

PROGNOSIS

The uncomplicated cases of pyelitis have a tendency to recover, but when complications are present then the prognosis depends upon the organs involved, the type of infection and the amount of permanent damage to vital tissue.

TREATMENT

The first and most essential consideration in the treatment of pyelitis is that of determining the cause and the active bacteria in the pelvis of the kidney which, in the majority of the causes, is an impossibility because of the limited laboratory facilities in a country practice. Therefore, I will endeavor to give the usual procedure and treatment in these cases.

The treatment of acute pyelitis consists in rest in bed with free administration of fluids by mouth and, if necessary, by needle. Mild laxatives should be given for the bowels and the urinary antiseptics most suitable for the case. The first and most effective drug given by me is potassium citrate in doses of four to seven grains every four hours to children under two years of age and seven to twenty grains to those over two years. If the quantity of pus in the urine has not decreased with appreciable improvement of the patient at the end of six days, the treatment is changed to urotropin combined with acid sodium phosphate, grains two to five, depending upon the age, every four hours for four days; then if necessary, return to the potassium citrate. Many cases of colon bacillus infection show marked improvement after the administration of hexyresorcinol in oil (capricol) 2.5 per cent strength, but if the pyelitis is caused by the streptococci, gonococci or pneumococci, the treatment with sulfanilamide has produced wonderful results when given in large doses, even to the extreme tolerance of the patient, the usual twenty-four-hour dosage being from one half to three fourths of a grain per body weight. The mandelic acid treatment, having proved impracticable in general practice, has been replaced by sulfanilamide.

The diet in these cases must be tempting and with concentrated nourishment, containing nothing to increase the irritation or encourage bacterial growth within the pelvis of the kidney. It has been impossible for me to try the ketogenic diet, because of the rigid requirements in its calculation and the extreme nausea usually found in these cases.

Chronic pyelitis must be treated by relieving any existing obstruction to the free flow of urine; if this cannot be accomplished then the case should be referred to a competent urologist for cystoscopic observation and treatment. Otherwise, serious complications may develop in the kidney resulting in permanent damage or total destruction with death of the patient. It is therefore well to remember that procrastination in these cases may mean the encouragement of the hand of death with its crushing grip upon the kidney.

Cervicitis—Its Symptoms and Treatment*

OMAR SIMMONS, M.D.
NEWTON, MISSISSIPPI

THE CERVIX is a deep-seated gland, which has two types of epithelium. It has an abundant lymphatic supply drainage toward other organs, and because of the fact that it is so easily exposed to infection and trauma, is an ideal place for the entry of organisms and the development of a "chronic" deep-seated infection which often defies even the most vigorous treatment.

One of the most frequent pathological lesions encountered by the gynecologist is cervicitis. Its symptoms may be so like other pelvic conditions that often laparotomies are performed when the cervix is at fault and not the enteroabdominal organs. Sometimes, although the cervix is correctly recognized as the etiological factor in the production of the patient's symptoms, therapeutic measures are used which are particularly adaptable to the case, and which fail to give the patient very much benefit.

In the normal cervix, the canal is lined by a single layer of columnar epithelium that is bathed by an alkaline secretion and is exposed to relatively few organisms. The vaginal portion of the cervix on the other hand is covered with epithelium which is stratified squamous in type, and is usually exposed to acid vaginal secretions, and to an enormous number and variety of organisms. These two types of epithelia usually meet at the external os, but often due to childbirth, instrumentation or infection, the columnar epithelium becomes exposed to the vaginal secretions and flora in the form of an erosion or eversion. These factors add to the ease with which invading micro-organisms are able to penetrate the deeper structures of the cervix and to set up a chronic inflammatory process. Irrespective of whether the invading organism be the gonococcus, streptococcus, straphylococcus, or colon bacillus, in the chronic stage, the histopathology is identical. This process once established produces a variety of symptoms, namely: leucorrhea, backache, unilateral or bilateral pelvic pain, irritable bladder, sterility, menorrhagia, dymenorrhea, and sometimes is the focal point for distant lesions such as arthritis, etc.

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*Read before East Mississippi Medical Society Meridian, Miss., Sept. 18, 1941.

Leucorrhea. Leucorrhea is the most frequent symptom of cervicitis and is never normal. It is no more normal for a woman to have a constant vaginal discharge than it is for her to have a discharge from her eyes or her nose or her ears. A slight amount of mucous passed just before and just after the menstrual period can be considered within normal limits but a discharge which persists throughout the major portion of the month should be investigated and a thorough attempt made to relieve this condition.

Backache. As the infective process in the cervix continues unarrested, there is an extension into the lymphatics, usually down the uterosacral ligaments, which is one of the most frequent causes of backache due to a pelvic lesion. Although backache is a common complaint in the female and may be due to a number of intra- or extra-genital causes, clinically, we are easily able to ascertain whether or not the cervix is the cause of the patient's backache. By placing the examining fingers posterior to the cervix and lifting the cervix towards the symphysis, an attempt is made to reproduce the patient's pain. Should this attempt be successful in giving the patient the same type of pain she complained of prior to examination then we are sure that the cervix is responsible for her backache, and that proper therapeutic procedure applied will clear up the symptoms.

Pelvic Pain. Chronic cervicitis is often the cause of pelvic pain of such a degree and such intensity that it might easily be confused with the pain of chronic bilateral salpingitis. Here again is a lymphatic extension from the infected cervix into one or both sides of the parametrium which is the causal agent in the production of the pain. Dr. Conrad G. Collins, of New Orleans, Louisiana, said in one of his papers on cervicitis that he had seen patients who had had either salpingectomy, salpingo-oöphorectomy, or bilateral salpingo-oophorectomy and hysterectomy return to the clinic complaining of the same abdominal pain they had experienced before operation. Examination of these patients revealed a cervix that was badly diseased, and that had received inadequate or no treatment at the time of operation. Appropriate therapeutic measures applied to these cervices in a large majority of cases, relieved their symptoms.

IRRITABLE BLADDER

There is a definite relationship between chronic cervicitis and trigonitis. Cystitis is a constant companion of cervicitis, and one's experience is that it is extremely difficult to get a satisfactory response to treatment of a cystitis which is accompanied by a neglected cervix. Proper treatment of infected cervices in these cases not only produces relief but a cure.

I. The management of cervical lesions is three-fold in type, (1) The interpretation of the pathological changes by careful visualization of the cervix, with properly taken biopsies, when doubtful areas are noted. The iodine test and colposcope are used by many, but *adequate exposure and good light seem sufficient.* Don't depend too much on the iodine test. (2) Adequate dilatation and study of the cervical canal to rule out polyps, canal abscesses and strictures, and endocervical malignancies. (3) Proper selection of either the cautery or one of the various surgical procedures. Cauterization is most frequently used now as it is less time-consuming, simple, rapid, bloodless, all of which is important in long gynecological operation.

II. Most gynecologists are using deep cauterization of the cervix, the main purpose being to eliminate cervicitis, but the prevention of cancer is also an object in this procedure. The serious results of cauterization of the cervix such as cellulitis, peritonitis, etc., are probably due in most instances I believe, first, to incomplete cauterization, thereby leaving a zone of infected glands beneath the cauterized tissue; second, to cauterization in the presence of unrecognized subacute or chronic infections of the upper genital tract; and third, failure to carry out the proper postoperative care.

III. Many abnormalities occur in the cervix of the uterus, including inflammation, erosion, cysts, polyps, leukoplakia, lacerations and carcinoma. Most nonmaligant abnormalities can be cured by some form of electrical apparatus, chiefly the nasal tip electric cautery, electrocoagulation and conization.

Application of Some of the Newer Vitamin Products In the Management of Obstetrical Cases*

GUS RUSH, JR.
MERIDIAN, MISSISSIPPI

DURING THE PAST few years rapid strides have been made in the synthesis and purification of vitamins for medical purposes, and it is my desire to discuss several of these which have been found to be of special value in the management of obstetrical cases.

The first of these is vitamin B_1, otherwise known as thiamin chloride. When this was first isolated the cost of its preparation was so high that its use was almost prohibited, but in the past several months newer and more economical methods have been developed which have reduced its cost so that the great majority of patients can well afford it. The use of thiamin chloride has in my experience, and the experience of many others, been of particular benefit in the reduction of the nausea and vomiting of pregnancy and has in many cases relieved many of the less troublesome symptoms of pregnancy. This preparation is available in tablet and liquid form, as the elixir, for oral administration and in rubber-stoppered form for hypodermic use. Orally the results have been much less than they have with hypodermic administration, due both to the taste of the tablets and the fact that the patients are too nauseated to continue the medication. The oral tablet most frequently used is the 5 mgm. tablet. The vials are of 10 mgm. per cc., 25 mgm. per cc. and 50 mgm. per cc. The most economical form is the 10 cc. ampoule with 250 mgm., given intramuscularly in doses of 1.0 cc. per day (or 25 mgm.) This dose usually controls the nausea and vomiting and may of course be given twice daily if the intensity indicates. In my own experience I have used thiamin chloride in thirty-odd cases and have had it prove of little value in only two cases, these latter cases resulting in spontaneous abortion at three months from the intense toxemia. The only unpleasant factor concerned with the hypodermic administration has been pain at the site of injection, this being of a lancinating nature and radiating to the shoulder. The deltoid muscle is the usual site of injection due to its accessibility. In all the cases in which I have used the infections, I know of no infections or local tissue reactions to its presence. At this point I might mention that thiamin chloride can be given at the same time and in the same syringe with liver extract intramuscularly if it is felt that the anti-anemic factor of liver is indicated.

The next in order of development, but by no means less in importance, is vitamin K, the anti-hemorrhagic factor. For many years some of the basic elements in clotting have been known and many theories have been developed around these elements, but there has always been an unexplainable substance without which the clotting time is greatly increased. This factor has been found to be vitamin K. Like thiamin, its first cost was prohibitive but it too has decreased in price greatly and its use has become available to the average patient. In connection with pregnancy its application aids in minimizing two most frequent complications: postpartum hemorrhage and intracranial hemorrhage in the newborn. Vitamin K must be administered prior to delivery to obtain its maximum effect in both the mother and child. Vitamin K is available under many trade names in the tablet and hypodermic form. As you all know its use orally is restricted unless it is given at the same time as large doses of the bile salts, since it is not absorbed in their absence. The hypodermic administration is the best means, as it insures the entry into the blood stream of the greatest amount of the K. The greatest advantage of the hypodermic administration is that it is not of special importance to have the mother take K prior to the approach of labor since it can be given at the onset of labor or just prior to delivery. It is generally thought that K should be given intramuscularly at least within thirty minutes before actual delivery to insure its benefits. In this way it reaches the bloodstream of the unborn child before the cranium undergoes its greatest pressure. Many authorities feel that the majority of intracranial hemorrhages occur in the interval between the onset of labor and the time the head actually begins its course through the outlet. If this view is held it would be better to administer K intramuscularly at the very onset of labor and repeat it as the second stage is approached. In those infants presenting signs of suspected intracranial hemorrhage, K can be given after delivery. The form of K with which I have become best acquainted has been synkamin, a product of Parke-Davis Co., which is one of the few hypodermic forms on the market. This is packaged in 1.0 cc. glass vials or ampoules consisting of 1.0 mgm. of synkamin hydrochloride, an amino-acid derivative. It is cautioned that this should be kept away from light due to its instability. I might also mention that K of course is utilized in controlling hemorrhage in many other conditions. The exact reason for the prolongation of bleeding time in labor cases has been of great importance and it is now felt that it is due to the presence in the blood stream of large amounts of free bile due to the alteration of metabolism in the liver and in this way resembles true jaundice in a slight degree.

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*Read before East Mississippi Medical Society, Meridian, Miss., Sept. 18, 1941.

Vitamin E, which has been isolated in free form wheat germ oil, is becoming of more importance in obstetrical use due to its aid in preventing spontaneous abortion due to its deficiency. Many cases of habitual abortion respond to its use. It is given in gelatin capsules usually, although is available in a liquid form by some manufacturers. The gelatin capsules with which I have become acquainted consist of three minims of wheat germ oil and their price is not prohibitive, usually costing the patient about two and one-half cents per capsule. This preparation is best given in doses of three to six capsules daily, from the date of the last missed period through the entire pregnancy. It has been my custom to give one capsule three times a day after meals, increasing this to two capsules three times a day during the week surrounding period in which the woman would menstruate if she were not pregnant, since this has been commonly found to be the most dangerous time especially in those who habitually abort.

In this short paper I have made no attempt to cover the other vitamins such as A, the B group, C, and D, as the importance of these is well known and have been demonstrated.

New York: Science marches on. With the aid of the chemical industry, the lion house at the Bronx Park zoo now smells as sweet as a lavender-scented handkerchief box. "Former disagreeable orders are completely masked by a natural evaporation of a combination of aromatic chemicals," a press release reads.

Address To Nurses*

V. B. PHILPOT, M.D.
HOUSTON, MISS.

PROFESSIONAL nursing does not date back into the past very far, but no profession was ever so firmly grounded and so universally accepted and respected in so short a time. Your profession is not simply the handmaid of medicine, it has come to be recognized as a co-worker of equal importance and respectability. While it is true that the doctor is and must always be regarded and recognized as the supervisor and director of all therapeutic measures looking to the cure or relief of sickness, it is the nurse's responsibility and duty faithfully to carry out the doctor's instructions. Having done this, the credit and honor that accrues from the handling of the case should be shared equally between doctor and nurse. But in order for this ideal relationship to exist between doctor and nurse, it is not enough for the nurse to be an automaton. She should be so trained in the fundamental principles of medicine that she can understand why certain tactics are being pursued and her judgment should be so developed that she can be depended on to recognize changed and changing symptoms and conditions, that she may meet emergencies that arise in the absence of the doctor. In fact, the time may come when the first two years in medicine may be added to the nurse's curriculum.

This preparation is important because doctors and nurses are co-workers and neither can render competent service when working alone. Furthermore, both doctors and nurses should be taught and should know that but few if any drugs are capable of curing disease. They should be taught and should know that drugs, when necessary, play only a secondary part in bringing about recovery from disease. Restoration to health must, of necessity, result from certain biochemical processes. These processes can and should be aided. This aid, in some instances, may be had through the administration of drugs, but far more often it comes through psychological influences. And here the nurse proves her fitness or unfitness for the proper discharge of the duties she has assumed. Her poise, her gentleness, her firmness of purpose, her sympathetic and faithful attitude are all necessary to the inspiration and support of the fighting spirit in the patient. Her tact and ability to render the patient comfortable, and her loyalty to the doctor who for the time is her commanding officer, spells the difference between her success or failure as a nurse and frequently between death and recovery of the case in her hands.

And now, since neither the doctor nor the nurse can render competent service when working alone, it appears to me that these two should work in pairs. I had rather have for my partner in practice such a nurse as I have described than any doctor on the face of the earth. And since there are not less than ten nurses to one doctor graduating, each nurse might strive to make herself necessary to some doctor's life and work. This she can easily do, provided he has been properly trained in medicine.

Every doctor, especially every country doctor, should have a *good* nurse associated with him in his work. When this ideal situation prevails, the rural communities will not find themselves destitute of medical care. And when this time shall come and our medical colleges quit preparing our young men for specialties and hospital service alone, and begin to train them in such a way as to fit them to be good all-round doctors, the joint professions of medicine and nursing will come into their own, and the people will rise up and call them blessed. As a central thought and parting suggestion let me say that the public, our younger doctors, and our nurses are over-sold on hospitals. The home is the place where most sickness has always been, always will be, and always should be treated. And only in the home can the best that is in doctors and nurses be developed and made manifest.

Again, permit me to say that Amory is honored by your presence, and I am most highly honored by your invitation to speak before you. Thank you.

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*Welcome address extended the members of the Northeast Mississippi Nurses' Association, Amory, Miss., October, 1940.

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A NEW HOSPITAL PLAN

(For the Hospitalization of the Indigent)

Mississippi is now a state financially able to assume its obligation to the indigent sick. No longer should the government feel that the medical and hospital profession should carry the large part of this burden.

A plan is needed to provide state-wide *adequate* care and *adequate* treatment at government expense for the indigent. This is not being done under the present plan which should be augmented by the state and federal governments. The plan should provide the following:

a. Adequate appropriation for emergency hospitalization and medical care in the communities in which the patient resides.
   1. This should be provided by the present private hospitals through charity ward service and the present state-maintained charity hospitals.

b. Adequate appropriations for building and maintaining a medical center which would be free from political control and would provide:
   1. The best housing and physical equipment.
   2. The best staff covering all specialties, departmentalized, consisting of a paid house staff and an uncompensated visiting staff.
   3. Adequate teaching facilities for the training of internes, resident physicians, nurses and visiting physicians.
   4. An institution which could and would encourage endowment by people who are so inclined and to which foundations and institutions would be willing to contribute and support certain departments.
   5. A central point in the road net of the state to which these indigent cases could be referred in the proper manner for adequate examination, diagnosis and treatment.

The present system of emergency hospitalization should continue to be made available in the communities in which the patient lives: in addition thereto, an institution should be made available, manned, equipped and maintained on the highest scale by our government. The usual and unusual cases should have care provided for them. Many classes of cases now too numerous to illustrate are not able to receive the diagnostic facilities and treatment they are entitled to in the average small hospital under the present plan. In turn, the medical profession is imposed upon in the medical and surgical care of these cases without remuneration.

—L. W. L.

The medical profession of our state will do its full duty in carrying medical service to all the people, but it can not carry the entire burden.

Everything else being equal we still thank you to trade with our advertisers.

You will note the complete program for the Mid-South Postgraduate Medical Assembly. Make your arrangements now to attend.

A merry Christmas and a happy New Year to each of our subscribers, advertisers, and readers. We are very grateful to each and every one.

Medical service to the indigent should be removed as far as possible from political interference. There is no better time to do it than the present.

You will note the list of exhibitors for the Mid-South Postgraduate Medical Assembly. We appreciate these exhibitors. They have been the big means in building the Mid-South. Dr. Gilbert Levy deserves much credit for the fine list of exhibitors.

You will note the new announcement of Riley's Hospital at Meridian. At least twenty-five new beds have been added with modern furnishings. A modern six-patient colored ward has been added. This hospital can now really take care of seventy-five patients. We congratulate Dr. Riley and his splendid staff.

You will note the announcement of the opening of the Oschner Clinic in New Orleans. New Orleans with its medical schools has been a great medical center for many years. One can sense the medical atmosphere when in this great cosmopolitan city. This clinic we are very sure will add to the greatness of this medical center.

Congratulations to Dr. Stanley Hill, of Corinth. on his election as president of the Northeast Mississippi Thirteen Counties Medical Society. He will do the job exceedingly well. The next meeting of the society will be held in Booneville in March. Dr. A. Street, president of the Mississippi State Medical Association, will attend this meeting. Dr. Street is making an outstanding president of our state association.

You will note the floor space for the commercial exhibits at our state meeting in Jackson at the Robert E. Lee Hotel in May. Dudley Jones is in charge of the commercial exhibits and Dr. Leon S. Lippincott of the scientific exhibits. Let us push forward for the best meeting the state association has ever had. Our state association needs every doctor in the state and every doctor needs it.

A public night was instituted at the last meeting of our state association. Dr. Seale Harris represented the medical profession and Dr. L. T. Lowrey, president of Blue Mountain College represented the laity. The public night at the Southern Medical Association is one of its most popular meetings. And we believe such a night can be of great value in our state meeting. We wish to call your attention to the address of Dr. Lowrey in this issue, prepared by request from the notes he used Public Night. Dr. Lowrey is one of the outstanding educators of the South. Blue Mountain College now has students from nineteen states, largely due to Dr. Lowrey's outstanding ability and standing outside his own state.

HOSPITAL CONFERENCE

Recently Dr. A. Street, president of the Mississippi State Medical Association, and Dr. J. C. Culley, president of the Mississippi State Hospital Association, with committees from both organizations met in Jackson at the Robert E. Lee Hotel to discuss the matter of hospitalization for the indigent in our state. Major Long presided over the meeting and Governor Paul Johnson addressed it. Governor Johnson expressed a most earnest desire for complete medical coverage to all the indigent. It was quite clear that he desired the service to extend beyond the hospital where needed. He also made it clear that he wants the service delivered in an efficient and economical manner and its application removed as far as possible from politics. He sincerely requested the aid of these state associations in his greatest desire, that of medical coverage to the poor. The governor spoke from his heart and in an unselfish plea for the unfortunate sick. He made it clear that he wants no medical service taken away, but is anxious that our system be made more efficient.

After Governor Johnson's address there was a free discussion of our present hospital system and how to make it more efficient. President Street emphasized that medical service to the indigent is the duty of the state, but that the state medical association would lend every effort possible to the legislature in an advisory way to make the service complete and economical to one and all. Dr. Culley pledged the aid of the hospital association in like manner. There was a free discussion of the entire subject on the part of the membership of the committees. Dr. Henry Boswell gave the assembly the advantage of a very informative hospital survey and study which he had made at the request of the governor.

The need of an internship in our state and the possibility and advisability of a four-year medical school was discussed. Dr. Guyton, dean of the Ole Miss Medical School, stated that only two out of five of our medical graduates return to Mississippi to practice, after taking their last two years in medicine and internship out of the state. The central hospital was discussed in its relation to internships and also as a basis for a four-year medical school, in case its establishment should be considered wise in the future. The idea prevailed that the hospital should be departmentalized and that competent heads should be in charge and their selection removed as far as possible from politics. The idea prevailed that no less service would be offered in the small hospitals of the state, that the central hospital would be largely a clearing house for the small ones. Hinds County and Jackson would be expected to contribute rather liberally to the construction of the central hospital if located in that area, and all of their charity cases would go to the central hospital for convenience and to furnish material for a complete internship. It was the general opinion in the committee that all cases outside the city and county in which the central hospital is located should be referred by other hospitals. The opinion seemed to prevail that about one million dollars would be sufficient for the construction of the building required at this time, but that the arrangement of the structure should be such that additions could be conveniently added. Going a bit further with Governor Johnson in asking for complete medical coverage for the indigent even in the homes, it seemed plausible that a complete hospital system for the state under the direction of the Board of Health or some nonpolitical board could be a great aid in carrying this service to the people, even into the homes. This idea warrants very serious consideration due to the great percentage of our people who are unable to pay for medical care, the thinning ranks of the medical profession and the age level of our doctors, which is far above the average for the nation. It seems certain that more government aid will be required for the indigent in our state. If the national government lends aid it expects to place the funds in the hands of an efficient non-political organization.

The above fairly well epitomizes the discussions at the conference. Mississippi is already doing more for its indigent sick than any other state in the union, in our opinion, as far as hospitalization is concerned, but there is much needed service beyond the hospital, for people who do not need to come to a hospital. It is perfectly reasonable that with a central hospital at Jackson properly equipped we could take care of our cripples instead of sending them outside of the state. Service for cripples should really be under the direction of the medical profession. With a central hospital located at Jackson we could offer a very fine internship in connection with the Mississippi State Hospital and the Sanatorium and others for part time. Internships could well afford to extend out into the small institution that is affiliated with the large one. This plan would give good training to the intern and the small hospital would receive service that is very urgently needed for the masses. If the central hospital is provided, it should give medical service more abundantly throughout the state, yet not cripple the little hospital that has stood like a Spartan soldier in the interest of better medical service to the rank and file. Sound thinking and unselfish action points the way at this time for a central hospital to complete a system that would offer the most complete coverage to every citizen of any state in the Union and any spot on the earth. We should have the vision and the courage to go forward. The system we could easily have would serve all the people every day in this machine age in which we live and it might be of the very greatest service in time of war. The means by which this service is to be delivered is the duty of the state, but the medical profession, as President Street stated, is ready to do its part if the people and the legislature desire it.

* * *

Dr. Anderson's editorial discussion of hospitalization in the November issue of the

Mississippi Doctor is both timely and interesting. It is certain that this question will be prominent among those coming before the approaching session of the legislature. And it is equally certain that politics will enter into the equasion. The ordinary politician is neither capable nor trustworthy in this most important matter. More than this, it is a regretable fact that politics has crept into the consideration of this question, even among doctors. There can be no doubt that some change should be made in the system now in vogue. Unquestionably there should be larger and better facilities at some central point and I do not hesitate to say that I think Jackson is the most suitable place for the location of the hospital to be built and maintained, even though it will be very difficult to keep the slime of politics out of the management of the institution if it should be built there. I agree fully with Dr. Anderson that it is neither wise nor necessary to spend a huge sum on this institution. I think one hundred beds with all other necessary equipment should be ample for the purpose to be met. Within a few decades the plant will be obsolete. And no truer statement was ever made than when Dr. Anderson said that "hardwood finish and tile floors do not heal wounds." Capable doctors and efficient nurses are the sina qua non in care of the sick if restoration of health is the object sought. Again I do not hesitate to go on record as favoring the sale, outright, of every hospital for care of indigent sick, now owned by the state, and the use of money received from these sales to be used in the construction of one hospital. The construction and management should never be entrusted to the care of petty politicians. It so happened that I introduced the first resolution looking to the establishment of our present method of carring for the indigent sick of our state. On the adoption of the resolution one of my good friends, who chanced to be superintendent of one of the state hospitals, came to me and said, "You have driven the entering wedge that will destroy our hospitalization system." I replied, "That is just what I hope will be the result."

In addition to the abolition of all the hospitals we have and the construction of one that is suitable for the purpose needed. there should be a radical change in the whole medical scheme as now practised and constituted. Entirely too much is said and thought about "hospitalization" while the great need is for provision for home care of the sick. Practically all of the pitiful sum of fifteen cents per capita is spent on surgical cases (and most of these would do better without surgery) and next to nothing for the care of the sick. The indigent sick are given no thought, they suffer and die at home with no attention except that rendered in pure charity by the overworked country doctor. These doctors are aging men and their number is rapidly declining. They are neither financially nor physically able to carry this burden longer. Personally, I am called on to do none, or very little, of this work but I know that these indigent people suffer for attention and the country doctor is overburdened. Something must be done and that speedily. It is not hospitals we need but more doctors who are capable and willing to do this rural work. Fifty cent per capita, one million dollars at least, should be appropriated, of course this sum should be safeguarded and properly expended. Soon the old doctors shall have passed. What, then, will be the fate of the rural sick? Owing to a faulty method of education and training the recent graduates in medicine seem to be neither capable nor willing to assume the role of country doctor. They seem to be as helpless as babies outside the walls of a hospital and without the help and sustaining influence of a trained nurse. Nurses are fine and very necessary and if well and properly trained are more important to the sick than half-baked medical recruits.

Those who are possessed of a comfortable home and its appurtenances do not need a hospital. Indigents in the rural districts all need capable and well trained doctors and nurses. Recently my own wife sustained an intracapsular fracture of the left femur. She was carried to one of the best institutions in the country where the fracture was nailed. She was then returned to her home where she will be cared for by capable nurses during the long period that must elapse until she is once more able to care for herself. This move was not made because it was necessary but because, in my thinking, it was best for her. I mention this case to illustrate my attitude towards hospitalization and to emphasize my contention that a real home is the place where people should be born, should be sick and should die. Hospitals are for emergencies and for the care of those who have no home or where home enviroment is not up to standard.

G. S. B.

THE SOUTHERN MEDICAL MEETING

(We are indebted to Dr. L. L. Minor for the following report of the meeting in St. Louis.)

Missouri is known as the "Show Me" state. The French first settled this state at Fort Orleans in 1719. It was admitted to the Union as a territory in 1812 and as a full fledged state August 10, 1821.

Saint Louis has near a million in population and is the metropolis of the Mississippi Valley. Its park system constitutes one of its most attractive features. Forest Park, which comprises 1400 acres, is the largest, and probably the most beautiful. Massive public buildings. unexcelled highways, homes that delight the eye are much in evidence in this great city.

The city is not in Saint Louis County, an anomaly, politically. In this city the "melting pot" has wrought well. People here have forebears from the four quarters of the globe, and yet there is a considerable southern sentiment.

There, November 10, 1941, Dr. Paul H. Ringer, of Asheville, N. C., president, called the thirty-fifth annual meeting of the Southern Medical Association to order.

The addresses at the public session by Dr. James S. McLester, of Birmingham, on "Nutrition in War Time," Mr. Edward A. Tamm, of Washington, on "Espionage in the United States" and Dr. Frank H. Lahey, of Boston, on "The Position of Medicine Today" were of acknowledged excellence. These and other papers and discussions will be published in the official organ of the association. The president's address on "Giants of Yesterday" was well delivered and his laudation of the physicians of old was a fine tribute to many heroic men.

"The Problem of Venereal Disease Control," by Frederic M. Hanes, Duke University School of Medicine, Durham, N. C., is an essay that every one should carefully read and do his or her utmost in every way to ameliorate and eradicate totally this menace.

Dr. R. Eustace Semmes, of Memphis, read a paper on "The Surgical Relief of Pain," which received much favorable comment.

Dr. John J. Shea, of Memphis, spoke on "Sinusitis in Children," which is the last and best word.

Dr. Howard King, of Nashville, read a most interesting paper on our old and efficient friend, "Boric Acid." After hearing this dissertation, one feels like using more of this useful drug in many varying conditions. We are prone to lay aside sometimes a true and tried remedy for a novelty. "Be not the first by whom the new is tried nor the last to lay the old aside."

Dr. R. L. Sanders, of Memphis, read a carefully prepared essay on "An Evaluation of the Methods of Partial Gastrectomy" with lantern slides.

Dr. Sanders is a Southern surgeon of note and truly puts his heart in his efficient surgical technique. His paper was discussed and elicited much commendation.

Dr. John F. Lucas, of Greenwood, discussed well two papers on gynecological subjects.

The chairman's address on "The Laboratory Program of the Mississippi State Board of Health," by Henry C. Ricks, director of laboratory, Mississippi State Health Department, Jackson, and the address of Felix J. Underwood, of Jackson, president of the American Public Health Association, were listened to with marked interest. The work of these two men is well known through this state and section. Dr. Underwood is a past-president of the Southern Medical Association and has had many honors bestowed deservedly upon him.

The American Academy of Tropical Medicine met conjointly with the American Society of Tropical Medicine, Marshall A. Baker, of Memphis, president.

The technical exhibits were large and good. These exhibits add to any meeting of this kind.

At the alumni reunions the "boys" enjoyed seeing their fellows of other years. Fraternity luncheons, the trap and skeet shooting tournament, golf and sight-seeing were likewise a pleasure to those who participated. The hobby exhibits, and particularly the scientific exhibits, were manifestly a feature of the meeting.

Dr. William Milton Adams, Mississippi born and reared, had an exhibit on plastic surgery; Drs. J. S. Speed and Harold B. Boyd, of Memphis, had one on bone defects with dual grafts and fibular transplants.

The motion picture in the Municipal Auditorium were excellent, one among which attracted much attention was "Plication of the Bowel for the Prevention of Intestinal Obstructure and Postoperative Adhesions," Hugh A. Gamble, Greenville, Miss. Also an interesting picture was presented by M. H. Knisely and T. S. Eliot, University of Tennessee College of Medicine, Memphis, Tennessee, "Changes in the Circulating Blood on Malaria Infections of Rhesus Monkeys." In the hobby exhibits Dr. Carrol C. Turner, of Memphis, an amateur artist, presented photographs that show marked talent in this line.

Mississippi's member of the Council S.M.A. is Dr. W. H. Anderson of Booneville. The doctor is well fitted for this office and the S.M.A. has no superior councillor.

In the Woman's Auxillary, Mrs. Harvey F. Garrison, of Jackson, is treasurer, Mrs. Lowry Rush, of Meridian, is on the budget committee, Mrs. D. J. Williams, of Gulfport, is a past-president and Mrs. R. H. Clark of Hattiesburg, a member of the council from Mississippi, is the new president-elect.

Among excellent exhibits was one by William B. Kountz and John R. Smith, Washington University School of Medicine, St. Louis, Mo., on Heart Sounds and Cardiac Vibrations. Dr. Kountz is better known in Hernando as the husband of Willie Weissinger, daughter of Mrs. A. J. Weissinger and the late Dr. Weissinger.

One gains much by attending these meetings, in fact, he can not afford to not attend, if he wants to keep abreast of the progress in modern medicine.

L. L. M.

Deaths

Dr. William R. K. Beck, 55, died at his home in Jackson, Miss., November 15, 1941, after an illness of several months. Dr. Beck was born in Camden, Ala., July 27, 1885. He received his medical education at the Birmingham Medical School, Birmingham, Ala. Dr. Beck was a World War Veteran and a member of the Henry Graves American Legion post; a member of the Methodist Church and of the Mississippi Medical Society. Besides his wife, he is survived by one brother, Frank Beck, of Yellow Bluff, Ala.

Dr. Guy Payne Sanderson, 45, died at his home in Vicksburg, Miss., Oct. 30, 1941, after an illness of about three weeks. Dr. Sanderson was born in Cave City, Kentucky, June 17, 1896. He received his M.D. degree from Vanderbilt University, Nashville, Tenn., graduating June 13, 1923. He was elected to fellowship in the American College of Surgeons at the annual meeting, October, 1939.

Dr. James August Dorsett, 64, a native of Scott County and resident of Lucedale for 37 years, died at the Mobile Infirmary, following a heart attack three days previously. Dr. Dorsett was born at Harperville, Miss., March 30, 1877. He received his medical education at Atlanta College of Physicians and Surgeons, in Atlanta, Ga., graduating in 1902. Surviving are his wife, one son, A. E. Dorsett; four daughters, Mrs. T. S. Doty, Mrs. M. H. Parker, Mrs. A. J Hull and Mrs. Cyril Bufkin; one sister, Mrs. E. F. Pruitt.

News and Comments

TO HEAD SOUTHERN MEDICAL ASSOCIATION

Dr. Harvey F. Garrison, Sr., of Jackson, who was chosen president-elect of the Southern Medical Association at its recent meeting in St. Louis. Dr. Garrison is worthy and well qualified to perform the duties of this the highest honor in the gift of this great association, the second largest medical group in the world. The Southern Medical Association is made up of sixteen states and this was its thirty-fifth annual session. He will be the fourth president from the state of Mississippi, although he is a native of Georgia. Dr. W. W. Crawford, of Hattiesburg, Dr. W. S. Leathers, dean of Vanderbilt School of Medicine, and Dr. Felix J. Underwood are the three who have already served in this capacity. Dr. Garrison has been very active in organized medicine in Mississippi, having served as member and chairman of the Council of the State Association for ten years, on the State Board of Health for eight years, and as president of the Mississippi Medical Association in 1937. He served five years on the Council of the Southern Medical Association and as chairman of the Section on Pediatrics. Dr. Garrison has been deeply devoted to the Southern Medical. Its interest is close to his heart in season and out. He possesses medical vision and practical application in abundance. Our beloved organization, the Southern Medical, will go forward under his leadership.

His home society, the Central Medical Society, is planning to honor him at its next monthly meeting, on January 6, in Jackson.

PRESIDENT-ELECT ASS'N OF AMERICAN MEDICAL COLLEGES OF MEDICINE

Dr. W. S. Leathers, dean of the School of Medicine, Vanderbilt University, who on October 29, 1941, was elected president-elect of the Association of American Medical Colleges of Medicine in the United States. The dean or a representative of each of the 77 colleges is entitled to a vote. The Association deals with all problems pertaining to medical school operations such as faculty, curriculum, special student problems, et cetera. The Association is especially interested in establishing standards for medical education.

The doctors of Mississippi will be delighted to know of this recognition of Dr. Leathers' outstanding ability in medical leadership. He rendered a great service in public health in Mississippi. Many other honors well deserved have come to him. He served as president of the Southern Medical Association while a resident in Mississippi.

PRESIDENT OF THE AMERICAN ASSOCIATION OF RAILWAY SURGEONS

Dr. J. L. Crook, of Jackson, Tenn., who was recently elected president of the American Association of Railway Surgeons. He is worthy and well qualified to wear any honor conferred by his fellow doctors. He is affectionately known everywhere as "Doctor Jere." He is not only an outstanding surgeon, but he is also a great civic leader. He has been particularly active in advocating ways and means of lowering the death rate in appendicitis. In addition to many other honors, he is a past-president of the Southern Medical Association and the Mid-South Postgraduate Medical Assembly. Dr. Crook fought ill health for four years, but he had the pluck to come back and he is going in full swing now. He merits the love and admiration that his friends bestow upon him.

Physicians and surgeons who are interested in employment in California should correspond with the California State Personnel Board. A recent change in the law allows accredited physicians and surgeons to practice in state mental institutions and homes for the feeble-minded for one year without first having a California license. Write William K. Smith, Acting Executive Officer, 1015 L. Street, Sacramento, Cal.

Dr. Joseph B. DeLee, of Chicago, Illinois, Professor Emeritus of Obstetrics and Gynecology, University of Chicago, was awarded the Mississippi Valley Medical Society Distinguished Service Award for 1941 at the annual banquet of the Society held at Cedar Rapids, Iowa, October 2. The award is given annually to an active member of the Society for "unusual and distinguished service to the medical profession." The citation of the annual awards committee of the Society in connection with Dr. DeLee's award was, "Joseph DeLee, physician, humanitarian, foremost in obstetrics, a credit to himself, his associates, his profession and his country."

Dr. J. P. Walker, of Marks, was elected president of the Clarksdale and Six Counties Medical Society at a meeting held on November 12, at Clarksdale; Dr. Guy Post, director of the Coahoma County Health Unit, was reelected secretary-treasurer. Vice-presidents representing the counties were elected as follows: Dr. W. P. Warfield, Coahoma; Dr. A. C. Covington, Quitman; Dr. J. G. Backstrom, Tallahatchie, Dr. M. D. Jernberg, Tunica, and Dr. L. H. Brevard, Bolivar.

The Board of Censors is composed of Dr. L. H. Brevard, Bolivar; Dr. W. S. Slaughter, Jonestown and Dr. T. G. Hughes, Clarksdale. Dr. T. M. Dye was re-elected to the Medico-Legal Defense Board.

UROLOGY AWARD

The American Urological Association offers an annual award, not to exceed $500.00, for an essay (or essays) on the result of some specific clinical or laboratory research in urology. The amount of the prize is based on the merits of the work presented, and if the committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. Essays shall be in the hands of the secretary, Dr. Clyde L. Deming, 798 Howard Avenue, New Haven, Conn., on or before April 1, 1942.

DR. GARRISON TO BE HONORED

At the next meeting of the Central Medical Society, Tuesday evening, January 6, at the Robert E. Lee Hotel, special honor will be accorded Dr. Harvey F. Garrison, Sr., who was recently elected as president-elect of the Southern Medical Association. Dr. Seale Harris, of Birmingham, Ala., will be the guest speaker. His subject on this occasion will be "The Food Factor in Winning the War, and the Physician's Responsibility in the Present National Emergency." It will be remembered that Dr. Harris, a past-president of the Southern Medical Association, rendered a notable service in the First World War. Dr. M. Y. Dadney, editor of the Southern Medical Journal, and Mr. C. P. Loranz, secretary-manager for the Southern Medical Association, are among the special invited guests, as are Drs. W. W. Crawford, Hattiesburg, Felix J. Underwood, Jackson, and W. S. Leathers, Nashville, Tenn., all past-presidents of both the Mississippi State Medical Association and the Southern Medical Association.

COMING MEDICAL MEETINGS

American Medical Association, Atlanta City, June 8-12, 1942.

American College of Physicians, St. Paul, April 20-24, 1942.

Radiological Society of North America, San Francisco, Dec. 1-5.

Fourth Annual Forum or Allergy, Detriot, Jan. 10-11, 1942.

Mid-South Postgraduate Medical Assembly, Memphis, Feb. 10, 11, 12, 13, 1942.

National Society for the Prevention of Blindness, New York City, Dec. 4-6.

DEFENSE NOTES

The Government is faced with a critical need for physicians to serve as Associate Medical Officers in the Federal civil service in such agencies as the Veterans Administration, the U. S. Public Health Service, the Indian Service, and others. In August, 1940, the Civil Service Commission announced an examination (Announcement No. 101) to fill Medical Officers positions of various grades in the Government service. This examination has been closed and reannounced (Announcement No. 130) with certain modifications. Examination covers three grades: Associate Medical Officer, $3,200 a year; Medical Officer, $3.800 a year and Senior Medical Officer, $4.600 a year. No written test is required. Applicants are rated upon their education and experience. The maximum age limit for all grades has been raised to fifty-three. Announcements and application forms may be obtained at any first- or second-class postoffice, or from the Civil Service Commission, Washington, D. C.

A vital part of this nation's "all out" defense effort is the safeguarding of its health. The rapid growth in industrial and governmental production has caused unusual concentrations of population and increasing health problems. To assist state, county and local health officials in coping with these problems, the U. S. Public Health Service in planning to appoint health education consultants to various defense areas. The positions, paying $2,600 to $3.800 a year, will be filled through the open competitive examination process and the Federal Civil Service Commission has just issued the examination announcement. A written test will not be given, but applicants will be rated on their qualifications and corroborative evidence. Applications must be filed with the Civil Service Commission in Washington, D.C., not later than December 11, 1941. Examination announcements can be obtained at any first- or second-class post office or at the central office in Washington, D.C.

SHOCK TREATMENT LAUDED BY DOCTORS

The following news item from the *Meridian Star* we feel is worth passing on to our readers. We must become interested in mental cases. It is good to see the interest on this important subject manifested in our state. Ed.

The Lauderdale County Medical Society enjoyed a most important and the final meeting for 1941, November 20, as guests of Dr. J. S. Hickman, superintendent of the East Mississippi State Hospital. All the program took place in the hospital in order that important demonstrations with the electro-shock machine might be given for those doing general medicine, except a talk by Dr. Seale Harris of Birmingham, memorializing "Banting and the Miracle of Insulin," at the Lamar Hotel, where a sumptuous dinner was served with Dr. Hickman as host.

The paper of local interest was read by Dr. William J. Cavanaugh, a member of the staff of the State hospital. The title of his paper was "Shock Treatment as Used in East Mississippi State Hospital." The paper was discussed by Drs. M. J. L. Hoye, T. G. Cleveland and John S. Hickman. The discussion brought out that:

"The electro-shock therapy was first used in Mississippi at Hoye's Sanitarium. The electro-shock treatment is the safest and most efficient of the shock treatments. It is now extensively used in this country and is used principally in the manic depressives, involutional catatonic dementia praecoxes and certain psychoneuroses. and gives fully as good results as metrazol. The State hospital began the use of the electric shock treatment in July, 1941, and to November 1, had treated 38 cases, giving 192 shocks. All the patients treated were either cured or showed improvement. It is not dreaded by the patients, and out of thousands of cases reported in the literature, no deaths have occurred. Two patients were treated, following the paper, that the doctors could have first-hand knowledge of the technique.

Many Fail To Have Treatment

"Many private hospitals have been very negligent in adopting the shock method, the one greatest hope for the cure of a mental case. If treated during the first six months of the illness 85 per cent should get well. In a recent bulletin 'Selective Service Psychiatry' it is stated 'There is small likelihood that any attempt will be made to rehabilitate registrants placed in classes I-B or IV-F by reason of mental or personality handicap, unless the devotees of electro-shock therapy gain control of psychiatric policy and administration.'

"Dr. Wendell Muncie, of Baltimore, in his paper titled 'The Present Status of Psychiatry and Psychiatric Treatment,' states "Ease of hospitalization in established clinics is another corollary of the humane movement. Yet there is still a widespread belief, especially among physicians in general practice, that hospitalization should be delayed until all other measures have been given a 'fair trial.' Patients, literally clamoring for psychiatric help, are still 'shielded' from the only contact which can offer anything tangible. In such fashion is psychiatry kept separate from general medicine.

"From the standpoint of training of the

young psychiatrist, there appears to be only one view to take: Shock treatment must be fused with our heritage of psychiatric wisdom from the past and yet to be reached. It has already enriched our experience and our purchase on some of the most difficult of tasks.

"Every worth while psychiatric hospital is being made to take notice of the excellent results being made by the electro-shock treatments. The degree of treatment can be controlled. The patient does not experience any anxiety or distress. The future health of the patient or the possibility of his getting well rests in the hands of the general practitioner. The cases must be treated early."

RESOLUTIONS OF RESPECT

Whereas, "Life is the childhood of immortality" and our beloved friend and co-worker, Dr. Guy Payne Sanderson, began his immortal youth at Cave City, Kentucky, June 17, 1898, and fulfilled life's great end in "living well," despite the fact that the "tangled skein of life" is made up of many strands of good and evil; and,

Whereas, The unseen hand on October, 1941, threw the fatal dart that pierced the heart, and lifted the "crown of thorns" from the brow of our friend and associate, Dr. Guy Payne Sanderson, to make place for the insignia, which makes known the service he gave his fellow-men, who now "like weeping Sisters" bow in loving gratitude and silent adoration and forever hold in the sacred sequestered confines of their memory shrine his "funeral urn"; and,

Whereas, The history of achievements of any community depends upon what individuals do, thus an individual's time misspent is not lived but lost, well spent, is bountifully lived despite shortness of years; so the earthly sojourn of our departed friend was not long as measured by the moving hand of the clock, though his beneficent achievements were many, but long as counted in years of service well rendered by one who enjoyed life much, despite the fact that he had walked with bare and bruised feet the "Alpine heights of physical affliction"; and,

Whereas, Our beloved friend, confrere, and fellow member of the Issaquena-Sharkey-Warren Counties Medical Society was in life a faithful demonstrator of humanitarian principles, a loyal exponent of ethical medical teachings and practices, a physician of repute and a surgeon of renown, a fosterer of the fraternal spirit of his profession, a man who possessed the mind and feelings of nobility; therefore

Be it resolved, That each and every member of the Issaquena-Sharkey-Warren Counties Medical Society bow his head in grateful submission to our irrevocable loss in the passing of our esteemed member, Dr. Guy Payne Sanderson, who in the midst of his great mission ere the noon time had fully come, relaxed his hand and work was done; and

Be it further resolved, That the members of this medical society in response to the benevolent spirit that makes the whole world kin, when sorrow and death comes to mar our transient joys, do hereby express our deepest sympathy to the wife, parent, brothers, sisters and kindred all of his family and in token thereof we spread upon the minutes of this society a copy of these resolutions for indefinite preservation and send a copy to the members of his family, and copies to the local press and *The Mississippi Doctor* requesting their publication as a sincere expression of our sincere appreciation and sympathy.

F. Michael Smith
Guy C. Jarratt
Preston S. Herring
Committee on Resolutions

For Sale: Cash or terms. A fine Fischer D60 X-ray and fluroscope. Automatic Bucky grid. SHOCK PROOF. Cannot tell the machine from a new one. Used very little. Bought for my clinic at Memphis. Not needed in present office. Complete equipment, tanks, all needed cassettes, film holders, lead storage boxes for films, timing clock, special equipment and viewing box. Will sell for two thirds of invoice. The price is probably higher now. This is cash price. Adequate for small hospital or office. Automatic timer.

Dr. James H. Lipsey,
Brookhaven, Miss.

Book Reviews

DR. COLWELL'S DAILY LOG FOR PHYSICIANS. Price $6.00. Published by the Colwell Publishing Company, Champaign, Illinois

The Daily Log is a convenient, concise, practical method for any doctor to keep his financial records with a minimum effort. Each day's business has a page of 36 lines to itself. At the end of each month will be found a business summary, expense sheets, personal account, inoculations, surgical record, narcotics dispensed, social security tax, appointments and utility record. At the end of the year are pages for an annual summary, notifiable diseases, obstetrical waiting list and record of deaths. The Daily Log is sold only through the mail. If you have not used it we suggest that you order a copy to use next year.

BODY MECHANICS IN HEALTH AND DISEASE. by Joel E. Goldthwait, M.D., F.A.C.S., LL.D., Lloyd T. Brown, M.D., F.A.C.S., Loring T. Swain, M.D., and John G. Kuhns, M.D., F.A.C.S., with a chapter on the Heart and Circulation as Related to Body Mechanics by William J. Kerr, M.D., F.A.C.P. Price $5.00. Published by J. B. Lippincott Company, Philadelphia. 316 pp., 121 illustrations.

This, the third edition, has been completely revised and reset. The authors have changed the title from "Body Mechanics" to "Body Mechanics in Health and Disease." Special attention has been given to the recognition and treatment of mechanical defects; special emphasis has been placed on the maintenance of physical fitness and health. Prevention of deformities is given importance. A chapter on developmental deformities has been added, and a number of chapters have been wholly rewritten.

THE TOXEMIAS OF PREGNANCY, by William J. Dieckmann, M.D., Associate Professor of Obstetrics and Gynecology, The University of Chicago, Attending Obstetrician, The Chicago Lying-in Hospital and Dispensary; Attending Gynecologist, Albert Merit Billings Memorial Hospital of the University of Chicago; Associate Editor of the *American Journal of Obstetrics and Gynecology;* Co-chairman of the Conference on Eclampsia, United States Department of Labor, Children's Bureau, 1941. 521 pp. with 50 text illustrations, 3 color plates. Price $7.50. Published by The C. V. Mosby Company, St. Louis, Mo.

Dr. Dieckmann has written this book with two objectives in mind: (1) to acquaint the obstetrician with some of the recent contributions on physiology pertaining to obstetrics. (2) to acquaint the investigator, untrained in obstetrics, with some of the physiology and pathology of obstetrics.

SYNOPSIS OF GENITO-URINARY DISEASES, by Austin I. Donaldson, M.D., F.A.C.S., Richmond, Virginia, Professor of Genito-urinary Surgery, Medical College of Virginia; Genito-urinary Surgeon to the Hospital Division, Medical College of Virginia; Genito-urinary Surgeon to Crippled Children's Hospital; Urologist to St. Elizabeth's Hospital; Urologist to St. Luke's Hospital and McGuire Clinic. Third Edition. 302 pages with 112 illustrations. Price $3.50. Published by The C. V. Mosby Company, St. Louis, Missouri.

The chief reason for this third edition is the new drugs and the indications for their use. In Chapter II the section on internal medication has been rearranged and several new drugs have been added. In Chapters V and VI the application of sulfanilamide and the sulfanilamide derivatives to treatment of genitourinary tract infections is discussed. This is one of the excellent series of synopses that are published by Mosby, each bound to form a "set" with the others. This last one is just as excellently adapted to office use as the others.

TEXTBOOK OF BACTERIOLOGY, by R. W. Fairbrother, D. Sc. M.D., M.R.C.P., Director of the Clinical Laboratory, Manchester Royal Infirmary; Special Lecturer in Bacteriology, University of Manchester. Third edition. Price, $5.00. Published by the C. V. Mosby Company, St. Louis, Mo.

The author presents in an accurate and interesting manner the fundamental principles of bacteriology in their relation to medicine and public health. In this book the application of bacteriology to medicine is considered under four well-selected main topics: (1) the identification of pathogenic bacteria, (2) the immunological diagnosis of disease, (3) the detection of individuals susceptible to a given disease, and (4) specific prophylaxis and therapy including the use of chemotherapy. All bacterial diseases are carefully considered under these four groups. The size of the book and the material covered are such as to make it adaptable for use by undergraduate students in bacteriology and other specialized courses such as dentistry and nursing. The author is a thorough student of bacteriology and has written an authoritative text on this subject. His style is easy and can be readily understood. This edition is more rounded out, more smooth, and more up-to-date than the previous editions.

HANDBOOK OF COMMUNICABLE DISEASES, by Franklin H. Top, A.B., M.D., M.P.H., Director Division of Communicable Diseases and Epidemiology, Herman Kiefer Hospital and Detroit Department of Health; Associate Professor of Preventive Medicine and Public Health, Wayne University, College of Medicine; Special Lecturer in Communicable Diseases and Epidemiology, University of Michigan. 682 pages with 73 Text Illustrations and 10 Color Plates. Published by The C. V. Mosby Company, St. Louis. Price $7.50.

This book is a handy reference for all persons whose professional duties necessitate contact with certain communicable diseases or infestations. The author has attempted to present the material in a concise manner. The diseases have been classified in a way which is different but one that it is hoped will prove helpful to the student. Although numerous articles and texts have been consulted, the book is primarily the outgrowth of the clinical experience of the author and his predecessor, Dr. John E. Gordon, now Professor of Preventive Medicine and Epidemiology at Harvard University.

PRINCIPLES OF MICROBIOLOGY, by Francis E. Colien, B. S., M.S., Ph.D., F.A.P.H.A., Associate Professor of Bacteriology and Preventive Medicine in The Creighton University School of Medicine; Lecturer in Public Health and Preventive Medicine, Creighton Memorial, St. Joseph's Hospital School of Nursing, Omaha; Director of Laboratories Health Department, City of Omaha; and Ethel J. Odegard, R.N., A.B., M.A., Instructor in Sciences Applied to Nursing, Colleges of Saint Teresa, Winona, Minnesota. 444 pages, with 140 text illustrations, 18 color plates. Price $3.00. Published by the C. V. Mosby Company, St. Louis, Mo.

This book has been developed from the authors' lecture and laboratory outlines which have been frequently revised during the past fourteen years while teaching student and graduate nurses. It deals with those aspects of microbiology which are essential for students in the field of nursing. The authors have presented the subject so as to emphasize its application to the nursing sciences and disease prevention rather than for the preparation of a specialist in microbiology. The subject matter has been arranged, with one or two exceptions, to meet the excellent recommendations of the Curriculum Committee on Education of the National League of Nursing Education.

INFANT NUTRITION, A Textbook of Infant Feeding for Students and Practitioners of Medicine, by Williams McKim Marriott, B.S., M.D., Late Professor of Pediatrics, Washington University School of Medicine; Physician-in-Chief, St. Louis Children's Hospital, St. Louis. Revised by P. C. Jeans, A.B., M.D., Professor of Pediatrics, College of Medicine, State University of Iowa, Iowa City. Third Edition. Price $5.50. Published by the C. V. Mosby Company, St. Louis, Mo.

Since the book was first published, research in nutrition has been extensive, which made it necessary for a second edition. Now a third edition has been published for the same reason with the name of another author added. The purpose of the book is to summarize present day knowledge concerning the nutritional requirements of infants under normal and pathological conditions and to indicate the effects of failure to meet any or all these requirements. The simpler means and methods of feeding infants is stressed by the authors. The book contains 31 illustrations giving height-age and height-weight charts for infant boys and girls. The book evaluates knowledge of nutrition on the basis of actual clinical trial, and conclusions have been arrived at not in the laboratory or easy-chair, but in the clinic.

IMMUNOLOGY, by Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P., Professor of Bacteriology, University of Kansas, and Pathologist to the Lawrence Memorial Hospital, Lawrence, Kansas. Second Edition. 639 Pages, illustrated. Price $6.50. Published by The C. V. Mosby Company, St. Louis, Mo.

This book is written for medical students and for others who have had training in pathogenic bacteriology, inorganic and organic chemistry and who are interested in the underlying principles involved in infection, resistance, and diagnostic laboratory tests. The author has attempted to lead the student to correlate some of the teachings of physiology, pharmacology, organic, biological and physical chemistry as well as anatomy, pathology and general biology and apply these teachings to the elucidation of the mysteries surrounding infection resistance, and diagnostic procedures. In view of the fact the student needs to acquire an adequate vocabulary of technical terms used in the text, definitions are given quite freely. Throughout the book standard techniques are presented, analyzed, and discussed. The chapters on hypersensitiveness are placed last because an understanding of the material contained in the chapters preceding them is of material value in understanding the present theories pertaining to the complex problems inherent in allergy. A great deal of interest is placed upon the subject of specificity since it plays such an important part in diagnosis tests and in passive and active immunization. Since the material in many of the chapters is rather condensed, the list of references at the ends of most chapters have been somewhat extended to accommodate the student who desires to read more extensively about some particular subject. A synopsis of the three chapters on specificity is presented in a separate chapter (XV) for convenience to the reader.

RHEUMATIC FEVER IN NEW HAVEN, by John R. Paul, M.D., Professor of Preventive Medicine, Yale University School of Medicine. Published by The Science Press Printing Company, Lancaster, Pennsylvania. 176 pp., 22 tables and 45 charts.

In this book the author has given the local epidemiological picture of this disease as the clinician sees it in this particular industrial city of New England. The information has not been collected with an eye towards making a series of generalizations about rheumatic fever, but it has been collected and presented as one might proceed in assembling data for a case report.

We have received a copy of the 1942 Warner's Calendar of Medical History published by William R. Warner & Co., Inc., 113 West 18th Street, New York City. We find this little book to be very useful in our office for listing appointments, telephone calls, etc. It also contains a reference manual of practical information; also some very interesting medical history sketches. A copy of this useful book may be had by writing to the publishers.

Mississippi State Medical Association

Organized 1867 **Next Meeting: May 12, 13, 14,1942, Jackson**

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President-Elect—H. Lowry Rush, Meridian
Vice-Presidents—B. B. O'Mara, Biloxi
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W. W. Crawford, Hattiesburg

Exhibits:
Dr. D. W. Jones, Jackson
Dr. Leon S. Lippincott, Vicksburg
Dr. W. H. Anderson, Booneville

COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	W. R. Brumfield, Gloster	Anderson Butler, Liberty	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. P. Walker, Marks	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	C. A. Kirk, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	H. L. Scales, Jr., Starkville	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr.,Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	C. E. Catchings, Woodville	R. J. Field, Centerville	
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Interpreting Medical Literature

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Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

EYE

CONVERGENCE INSUFFICIENCY

1. Differential diagnosis of the phorias by Prangen, A. de H. American Academy. J. Ophthal., 1941, March, April.
2. Surgical correction of pure convergence insufficiency by R. O'Connor, Arch. Ophthal., 1935, xiv, December.
3. Convergence Deficiency by I. Mann. Brit. J. Ophthal., 1940, xxiv, 373, August.
4. Convergence Insufficiency, Cushman and Burri, American Journal Ophthal., Sept., 1941.

Mississippians have long been agriculturists, but since the appearance of industrial life and its slow but gradual increase in the number of people so occupied, eye physicians are seeing a concomitant rise in the incidence of headache, eyestrain and associated symptoms due to inability to converge, or to maintain convergence, of their eyes.

Not only medical literature but general considerations point out that a sedentary life, with continuous close eye work, gives an individual insufficient muscular ability to achieve a very difficult task. Opthalmologists in this area are therefore finding more and more individuals who either do not need correcting lenses or possess the lenses they need, yet who suffer from eye fatigue. The largest portion of these falls into the class of muscle abnormalities.

A consideration of one of the most frequent types—convergence insufficiency—is therefore indicated, and a "miniature symposium" is herewith presented.

Prangen, of Rochester, points out that in making a diagnosis the convergence-divergence ratio is by far more important than the actual convergence power and divergence power. O'Connor, of San Francisco, recommends his cinch-shortening operation, well-known for its merit in strabismus, for those cases in which muscle training has been unsuccessful.

Mann, one of the most outstanding opthalmologists of England, who is contributing valuable articles to the Brit. J. Ophthal. during war-time, presents a series of cases on this condition. She finds the Maddox-Wing test of superior merit than the customary Maddox rod, and states the most characteristic finding in convergence insufficiency is an inability to perform voluntary convergence even when it is explained to them, and when there is a deviation outward of more than six degrees. For treatment, she uses muscle exercise instruments and attempts to produce convergence for distance, and educates her patients in the appreciation of physiologic diplopia and the utilization of this in training of the muscles.

Cushman and Burri present eighty cases, fifty-three of whom recovered completely from their symptoms by orthoptic training of various kinds. They do not attach much importance to the size of the phoria, but depend more on the symptoms, ductional balance and near point of convergence. However, they found the larger the exophoria for near, the greater the number of exercises required for recovery.

DISCUSSION: Prangen's paper dealing with diagnosis does not suggest any particular therapy. O'Connor, like many others who have made outstanding contributions to medical science, falls into the error of suggesting his remedy even for conditions not entirely within the correct scope. Examination of the case data presented by Mann and by Cushman shows that most are in the younger and middle span of life, where exercise is likely to be of avail. Muscle exercises in individuals who are fifty and over are not likely to relieve symptoms. The reviewer has seen twenty cases whose symptoms have disappeared with the use of base in prisms.

PEDIATRICS

Immunity to Tetanus Induced by Combined Alum-Precipitated Diphtheria and Tetanus Toxoids, Based on a Study of 65 Allergic Children Given a Third, or "Repeat," Dose—M. Murray Peskin—American Journal of Diseases of Children, 62-309 (August) 1941.

"From three to fifteen months after the completion of primary immunization with two 0.5 cc. doses of combined alum-precipitated diphtheria and tetanus toxoids (of a toxicity of 30,000 minimum lethal doses per cc.), 65 allergic children were given a third, or repeat, dose of 0.5 cc. Antitoxin levels were determined at various periods after the second and after the third dose of the combined toxoids, and totals of 153 and 332 tetanus antitoxin titrations, respectively, were performed.

"The incidence of local reactions both after the third and after the first two injections was about 25 per cent. An elevation of temperature lasting about one day followed administration of the third dose to three per cent of the children, as compared with an incidence of one per cent among those given two doses.

"No allergic reactions, such as urticaria or asthma, were encountered.

"From three months to two years after the repeat injection, negative reactions to scratch tests with undiluted combined alum-precipitated diphtheria and tetanus toxoids were obtained for 36 children.

"Adequate tetanus antitoxin titers (.01 unit or more of antitoxin per cc. of blood serum) were attained by all children within one month, and for the majority the titer was at its maximum level on the seventh day after a repeat dose of the combined toxoids. After a second dose adequate immunity was not attained by all of the children.

"The percentages of children with adequate immunity one and one and one-half years after receiving the third dose of combined toxoids were definitely higher (92 to 77) than the percentages (65 and 50) obtained for a comparable group of children after a second dose.

"Thus, it can be concluded that the injection of a third, or repeat, dose of combined alum-precipitated diphtheria and tetanus toxoids into allergic children was followed in all instances by an adequate tetanus antitoxin titer, which was higher and lasted for a much longer period than that which followed the second injection, even though the corresponding titer obtained within one month of the third injection was the same or less. Moreover, there appears to be a limit beyond which repeated injections fail to increase the titer."

COMMENTS

It has been our practice to give two doses of one cc. each, two months apart, of the combined diphtheria tetanus toxoid to all children regardless of whether they are allergic or not. We feel that it is by far the least likely to give reactions and at the same time we get the protection against diphtheria and tetanus. Of course, combined diphtheria tetanus toxoid is by far the only choice for all allergic children. Our percentage of negative Schick tests is greater after giving these two doses of diphtheria tetanus toxoid.

State Board of Health

Felix J. Underwood, M.D.

POLIOMYELITIS IN MISSISSIPPI

Retrospect and Prospect

The summer of 1941 brought to Mississippi its second epidemic of poliomyelitis in five years, an epidemic of not such great proportions as the one in 1937 but a serious one nonetheless. Since the epidemic trend of this strange malady seems to be in a westerly direction, and judging from the high incidence in Alabama and Georgia during the current season, it is pointed out that Mississippi may suffer a heavier incidence in 1942 than in 1941. Consequently, every preparation should be made which will help to minimize its severity. While there is much yet to be learned regarding the disease, much may be accomplished by properly putting to work the knowlege developed to date. In the meantime medical science continues to advance at an amazing speed, arousing the hope that some new discovery will be made very soon which will contribute to the prevention and control of poliomyelitis.

Most state and local departments are planned and developed with facilities to cope with communicable diseases as they occur according to normal expectancy; but when they reach epidemic proportions personnel and other facilities immediately need strengthening. Difficulties usually mount when the epidemic is caused by such a baffling disease as poliomyelitis, and health departments feel more keenly than ever the need for help. It has been a source of real satisfaction to be able to look to an organization like the National Foundation for Infantile Paralysis for assistance in meeting many of the problems and needs of Mississippi's epidemic this year. Organized in January, 1938, the Foundation aided by its many local chapters, has been doing everything within its power to lead, direct and unify the efforts aimed at control of poliomyelitis and alleviation of after-effects. Supported by funds raised during the President's Birthday Celebration, the Foundation encourages and makes grants for laboratory and clinical research, establishes standards for after-care, conducts educational programs, and assists state and local health agencies during epidemics of the disease.

By August 1, cases in Mississippi had totaled 59 and were still climbing. The state had no isolation hospital and none of the existing hospitals would receive poliomyelitis cases until a 21-day period of contagion had passed. It was apparent that some provision would have to be made for immediate medical, nursing, corrective and other care, of current cases as well as facilities for diagnosis, hospitalization, and after-care of the cases already reported. The State Health Officer, working hand in hand with the Director of the Crippled Children's Service, secured permission from the Governor to use one of the old state buildings, a 2-story brick structure, for quarters for a treatment clinic. To make it possible to renovate the building and make it desirable for occupancy, a special grant of $3,000 was allowed by the State Building and Repair Commission. The final step in equipping the Clinic to be able to accept patients was provision of personnel and funds for operation. The National Foundation generously responded with a check for $5,000 for this purpose, which amount was matched by the Crippled Children's Division. The Clinic was set up to operate for a period of five months. Opening on September 1, it has a staff of two nurses, one hostess, an orderly and two maids. The services of an orthopedic surgeon and a pediatrician have been available to each patient, and those of a neurologist may be had on call. The Clinic has 14 beds, 7 of which are for white patients and 7 for colored. Equipment includes two respirators which were donated by the State Federated Women's Clubs for use in the previous epidemic. There have been 57 cases admitted for treatment (as of November 21). A total of 158 splints and 44 Bradford frames have been furnished by the National Foundation to assist the work to date.

Physicians treating poliomyelitis cases have been notified that they might secure orthopedic and pediatric consultation services at the Clinic if desired. They have also been advised of other services available there, such as assistance in applying splints, casts, etc.

The Clinic, without doubt, has been the solution to many problems in caring for victims of poliomyelitis. It helped to relieve much anxiety by getting something done for many stricken persons and in addition it served to enlighten those who came in contact with the work as to proper procedures in after-care.

The number of poliomyelitis cases reported each year since 1936, together with the case rate per 100,000 population, is as follows:

Year	*Cases*	*Rates*
1936	138	6.7
1937	352	16.1
1938	69	3.2
1939	26	1.2
1940	43	1.9
1941 (to Nov. 21)	149	6.8

The National Foundation for Infantile Paralysis is doing excellent work in Mississippi and in other states to keep physicians, nurses and laymen up to date regarding what is known about poliomyelitis and the most effective measures of dealing with it. Refresher courses in orthopedic technics for physicians and nurses help to meet this need and are recommended as one of the most constructive ways in which the Foundation may assist states. Particularly worth while were the institutes for public health nurses held in nine different localities (Jackson. Indianola. Clarksdale, Batesville. McComb. Meridian. Gulfport. Laurel, and Tupelo) in Mississippi this year. These institutions were under the competent direction of Miss Norma Pfrimmer. R.N.. Assistant Consultant Nurse of the National Organization for Public Health Nursing. and sent to Mississippi by the National Foundation. Attendance included 163 public health nurses, 24 health officers, 23 physicians. and 51 others, making a total of 261. The public health nurses together with the nurses from the Crippled Children's Service have done excellent follow-up work with all cases after they have returned home from the Clinic.

The demonstrations at the institutes served a real public health purpose. it is believed. by pointing out how to prevent many needless mistakes in administering treatment and aftercare to poliomyelitis cases.

Some of the mysteries surrounding the disease were clarified for the general public at a State Fair exhibit, sponsored by the Health Education Division of the State Board of Health early in October. Although the number of cases had begun to decrease, interest of individuals registered an increase, as this exhibit proved one of the most popular of the entire fair. About 40,000 visitors saw it and many asked questions. The National Foundation provided much of the literature which was used at the exhibit. It is believed that public enlightenment regarding the present state of knowledge regarding poliomyelitis will have a helpful influence in averting panic in coming epidemics and in getting cases to medical attention in the early stage. Therefore, the importance of a board program of health education cannot be overemphasized.

To strengthen further facilities for combatting "polio," every county in Mississippi except one now has its local Chapter to work hand in hand with the program of the parent organization, the National Foundation for Infantile Paralysis, and indications are that there shall be 100 per cent organization very soon. In addition to participating in fund raising campaigns for the President's Birthday Celebration, these Chapters have engaged in much detail work, such as keeping records of cases, preparing reports of work accomplished. stimulating interest through the press. arranging for transportation to and from clinics for poliomyelitis cases, coöperating with the local health department in carrying out its policies and procedures relating to the disease, seeing to the provision of braces. crutches. hospitalization and other services, disseminating helpful literature. and assisting in rehabilitation.

It will in all likelihood be during an epidemic period that discoveries will finally be made which will make it possible completely to control or prevent poliomyelitis. Therefore, not only Mississippi but the whole world stands to benefit from any positive conclusions which may de drawn as to the manner in which the disease may be spread or brought under control. Good judgment was shown by the National Foundation. therefore. in assigning to Mississippi this year a public health expert, trained in epidemiology, to make detailed studies of as many cases as possible in coöperation with physicians. local health departments and the Division of Preventable Diseases Control of the State Board of Health. The individual assigned to this study was Dr. L. L. Lumsden, for many years with the United States Public Health Service. and well known for his previous contributions to epidemiology. His final report on the Mississippi epidemic will be received with interest.

Since the findings by Paul and Trask and associates of the poliomyelitis virus in sewage rural environment has assumed a place of increasing importance in epidemiological study, the public health official, because of his training and experience in this field, is particularly well qualified to establish facts and prove theories in the chain of transmission and control. It is perhaps not too much to hope that the not far distant future will bring new light on poliomyelitis, making it possible to conquer it as completely as has been done by past plagues, at first also baffling and mysterious.

In conclusion, a statement made by Mr. Basil O'Connor at the First Annual Medical Meeting of the National Foundation for Infantile Paralysis seems worth repeating:

Often we hear it said—and sometimes by well-meaning people—that the emphasis on infantile paralysis is disproportionate; that there are other diseases more devastating and of more serious economic consequence on which the Foundation should spend its money. Whether or not infantile paralysis in itself is of particular economic interest to the country, it is all that and much more to the individual unfortunate enough to become its victim.

And more than that, poliomyelitis is a member of a group of virus diseases which as a whole is probably of more economic importance than any other group of diseases now known. Information about any one of these diseases may be of value eventually in combatting other members of that class. And, while our fight is directly on infantile paralysis, I think we can safely say that we are indirectly aiding the investigation of many other horrible maladies.

Mississippi Public Health Association

An event of outstanding public health importance is the annual meeting of the Mississippi Public Health Association. The sixth annual meeting was held in Jackson, November 5-7, and was marked by a record attendance of 613. Papers presented were timely and interesting. The general session opened November 5 in the Heidelberg Hotel Convention Hall with Miss Opal Regan, R.N., Meridian, president. The program included such distinguished speakers as the following:

Lieut. Col. Leland O. W. Moore (Camp Shelby)—Military Preventive Medicine.

Col. Thomas L. Ferenbaugh (Camp Shelby)—The Role of Public Health Work In The National Defense Program.

Dr. John F. Kendrick (Raleigh, N. C.)—A School Health Coördinating Service.

Mrs. Gertrude Carlsrud Henning, R.N. (Minneapolis)—Minnesota's Program for the Care of the Premature Baby.

Mr. E. C. Sullivan (New Orleans)—Civilian Sanitation in the National Defense Program.

Mr. J. J. Bloomfield (Bethesda, Md.)—Industrial Hygiene.

Dr. L. L. Lumsden (New Orleans)—Epidemiology of Poliomyelitis.

Dr. Walker Wilkins (Raleigh, N. C.)—Coöperation in School Health Activities.

The general sessions and the sectional meetings were all well attended. There were 53 contributors to the program. The newly elected officers are as follows:

Dr. R. N. Whitfield, Jackson, president; Mr. John B. Grant, McComb, president-elect; Miss Opal Regan, R.N., Meridian, vice-president; Dr. George E. Riley, Jackson, secretary-treasurer.

Sectional Chairmen

Dr. J. C. McGuire, Hazlehurst, Administrative Section; Mrs. Mary Ada Lester, Lucedale, Public Health Nursing; Mr. Floyd Ratliff, Jackson, Sanitation Section; Dr. C. C. Massey, Meridian, Dental Hygiene Section; Dr. H. C. Ricks, Jackson, Laboratory Section; Miss Gladys Sears, Vicksburg, Clerical Section; Mrs. Mary Steele Nabors, Indianola, Vital Statistics Section.

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EXPERT ON CHILD HEALTH TO LECTURE

From Mrs. Leon S. Lippincott, Vicksburg, Chairman of Public Relations, comes the following announcement and appeal for interest:

At the meeting of the executive board of the Woman's Auxiliary to the Mississippi State Medical Association this fall, it was decided to invite Dr. W. W. Bauer, the director of the Bureau of Health Education for the American Medical Association, to visit Mississippi for a series of lectures on nutrition. These lectures will fit into any lay program and are especially appropriate for programs in connection with national defense.

Since Dr. Bauer represents the medical profession to lay groups, it is most desirable to interest and secure the attendance of as many organizations as possible for his lecture. It might be well to start with your parent-teacher associations and invite others to participate.

Will you contact, at once, your parent-teacher organizations and as many groups as you can in your territory, and find out if they would be sufficiently interested in this lecture to arrange a joint meeting during the week mentioned?

When the various parts of the state are heard from a schedule will be worked out with the exact date Dr. Bauer can give to you and your community.

It is believed that this is a real opportunity to carry out one of the great objectives of our Auxiliary and at the same time bring authoritative information on the important subject of nutrition to those parents of children, teachers, and others who should be most interested.

Contact your auxiliary president at once.

PUSH HYGEIA THIS MONTH

Members are urged by the *Hygeia* chairman, Mrs. Stanley Hill, to press subscriptions during December. Subscriptions are $1.75 for a year. Urge friends to give them as gifts, and keep in mind the three important places where *Hygeia* should be seen: every doctor's office, every beauty parlor, and every school library.

P.S. Are you getting *Hygeia* yourself?

THIRTEEN COUNTIES AUXILIARY

The December meeting of the Northeast Mississippi Thirteen Counties Auxiliary was held in Houston, where the doctors' wives there joined Mrs. V. B. Philpot in entertaining the group with a luncheon at the Philpot home. Poinsettias emphasized the Christmas motif, while the luncheon table presented an artistic arrangement of white snapdragons, flanked by silver candlesticks, centering a beautifully appointed table. Small Christmas corsages marked each guest's place. Honor guests included Mrs. Louis LeRoy, of Memphis, and Dr. and Mrs. Henry Boswell, of Sanatorium.

During the luncheon hour Mr. W. B. McDowell, accompanied by Mrs. C. H. McCrane at the piano, gave several selections on the violin.

Dr. W. C. Walker, of Houlka, welcomed the group, after which Mrs. Robert Christian presided. Officers for the new year were elected as follows: Mrs. Stanley A. Hill, president; Mrs. E. K. Guinn, McCondy, president-elect; Mrs. Robert Christian, Baldwyn, Mrs. T. M. Gore, Houston, Mrs. L. L. McDougal, Booneville, and Mrs. Hunter Scales, Jr., Starkville, the four vice-presidents; Mrs. A. J. Stacy, Tupelo, secretary-treasurer; and Mrs. T. H. Rayburn, Pontotoc, *Bulletin* chairman.

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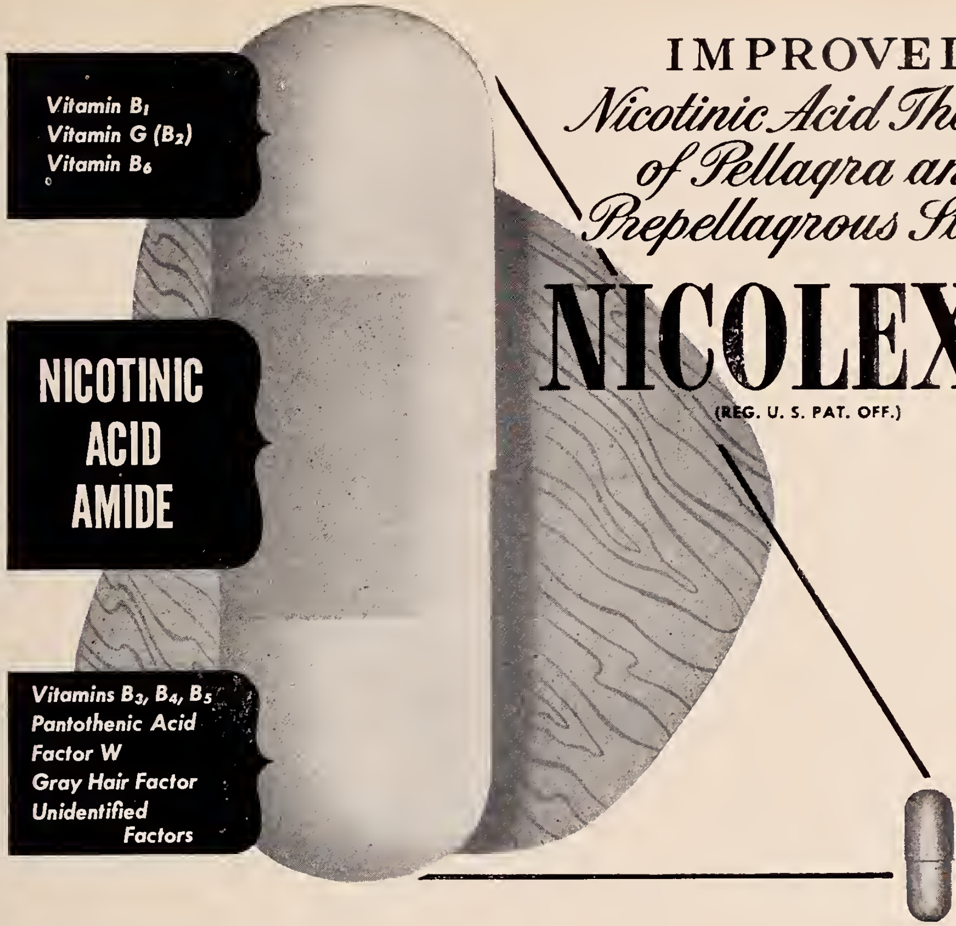
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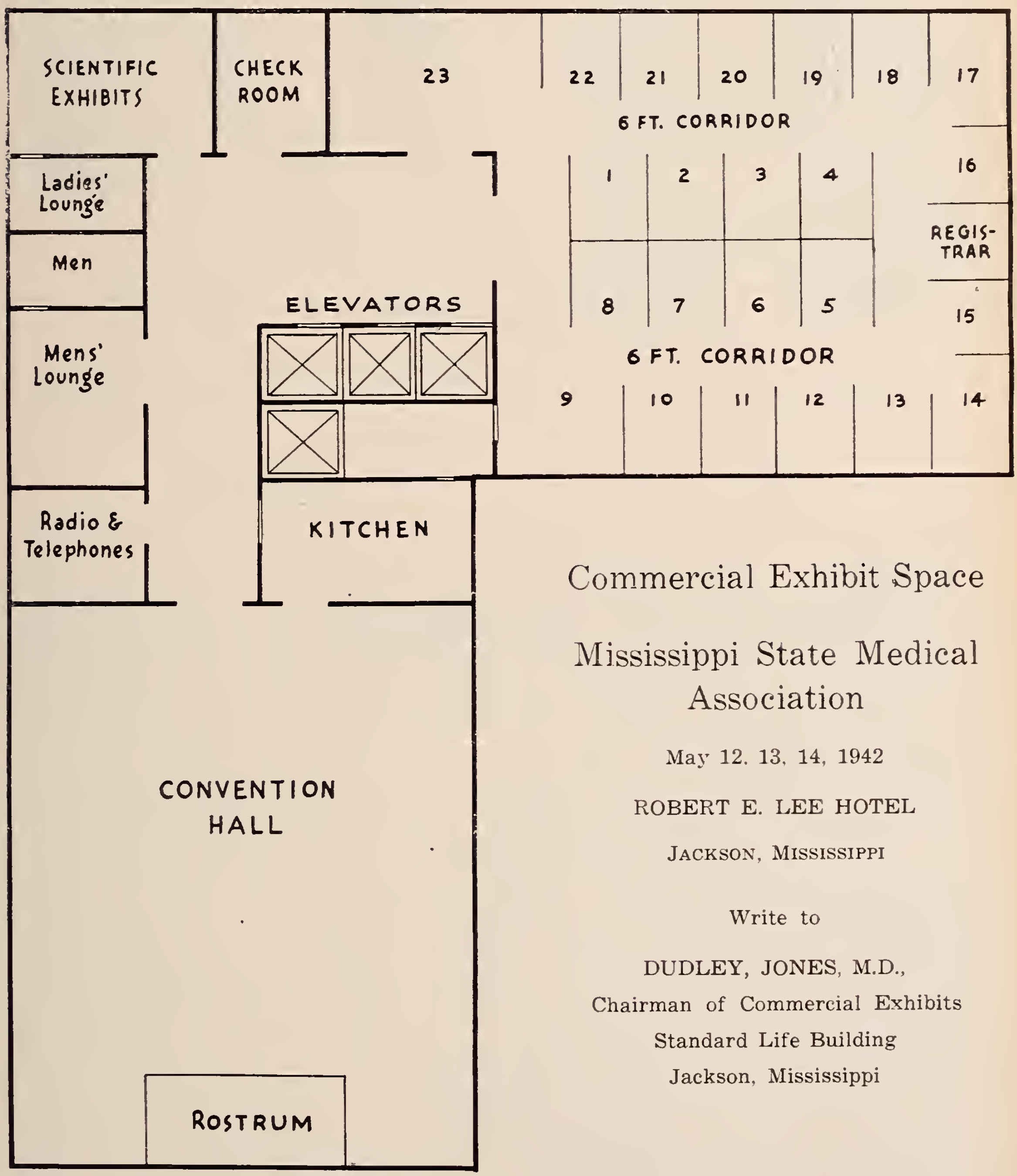
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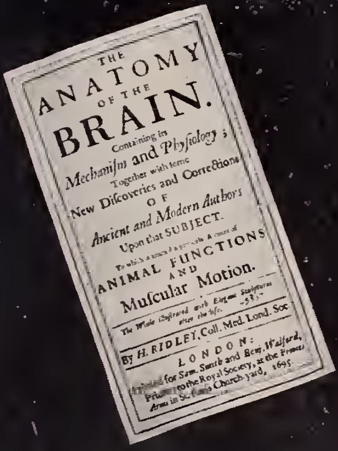

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1. Council Report: J.A.M.A., 113: 1734, 1939
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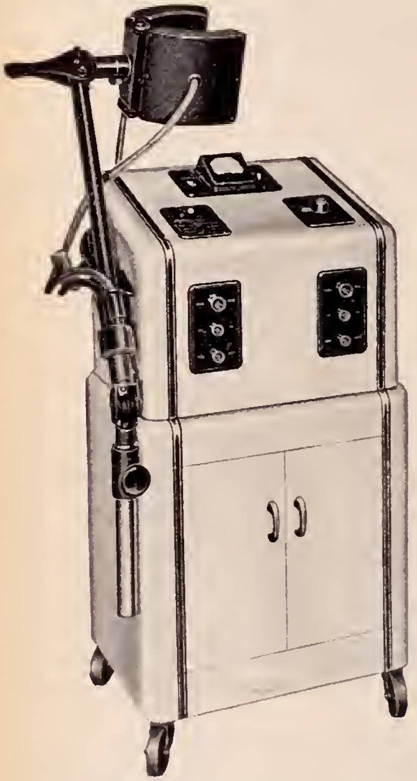

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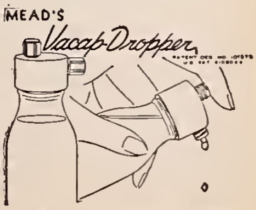

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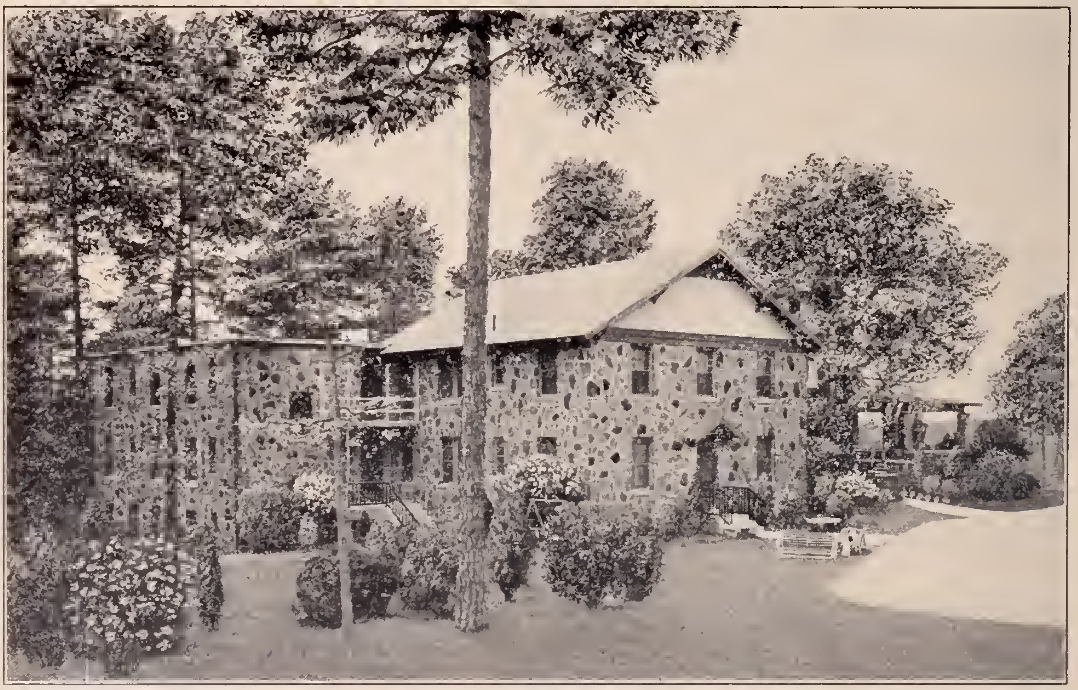

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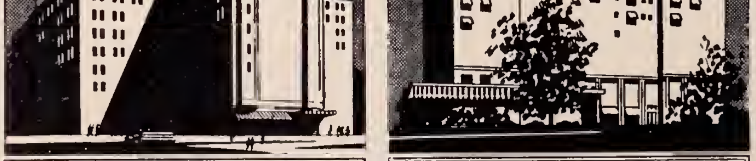

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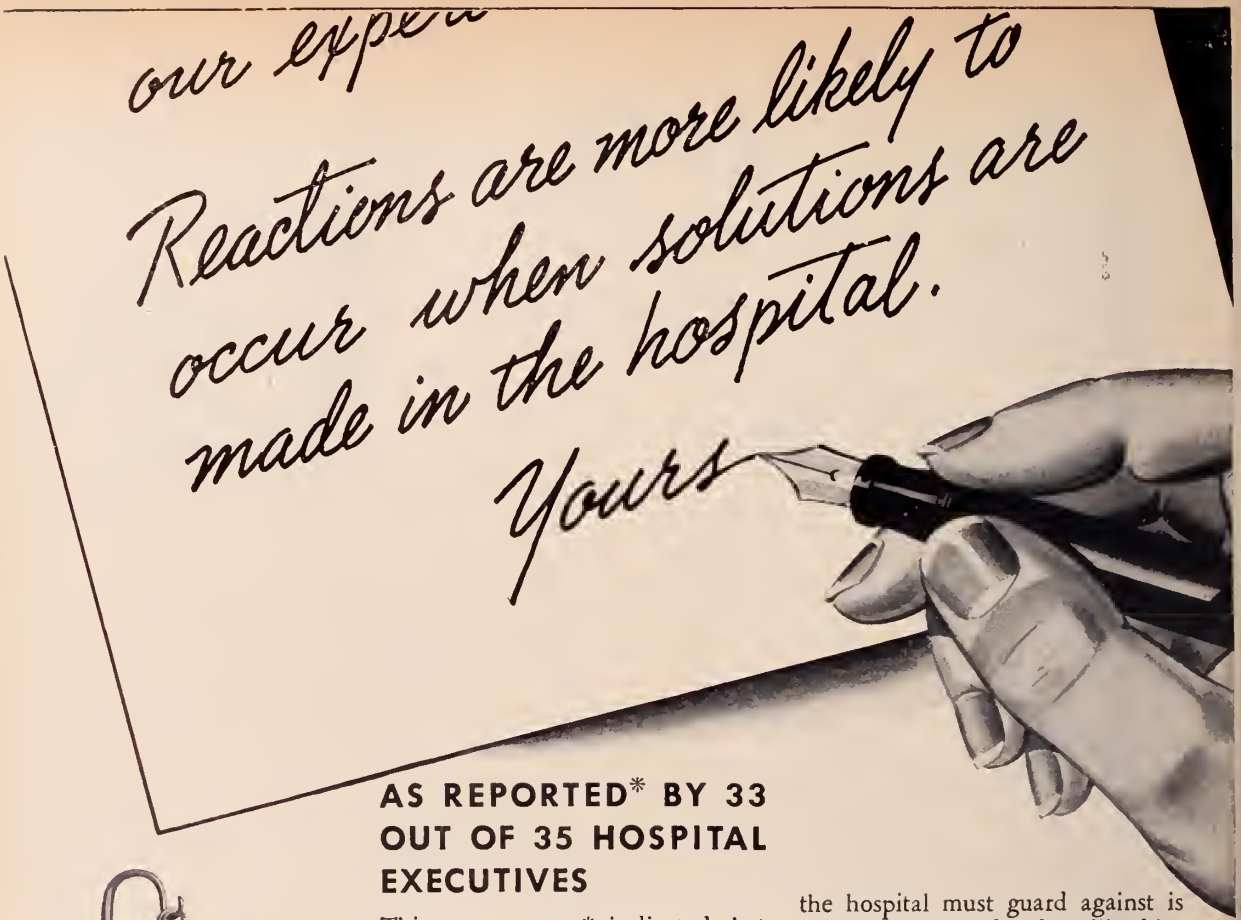
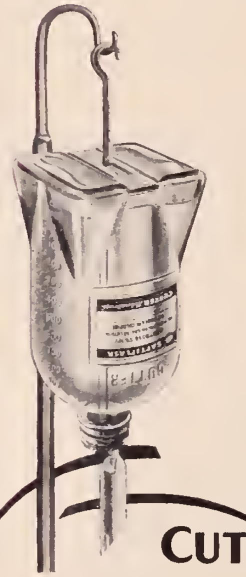


AS REPORTED* BY 33 OUT OF 35 HOSPITAL EXECUTIVES



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*Hospitals Report Current Practices in Use of Intravenous Solutions: *Hospital Management, Dec., 1940.* Reprints available.

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The Food Factor In Winning the War*

SEALE HARRIS, M.D.
Professor Emeritus of Medicine, University of Alabama, Colonel, (retired) Medical Reserve Corps, United States Army.
BIRMINGHAM, ALABAMA

IN 1898 Kaiser Wilhem II abdicated his throne because the German people were starving and demanding food, which he could not get for them; and the hope of winning World War II lies in keeping the German people prisoners in Western Europe until they are suffering from the want of food and clothing to such an extent that Hitler and his crowd, one fine day, will flee from the wrath of a disillusioned and outraged German people.

I speak with some knowledge of the pitiable plight of the German people following the last World War because I made investigations regarding food conditions and prevalence of diseases due to nutritional deficiencies in Germany and Austria about two months after the signing of the Armistice. A report of my findings was made to the Peace Conference in Paris in February, 1919.

FOOD DEFICIENCY DISEASES IN GERMANY IN 1919

The Germans suffered more from a deficiency of milk, cream and butter and other fats, containing vitamins A and D, and fruits, containing vitamin C, than from the lack of vegetables and cereals, containing the various factors in vitamin B.

The children in Germany were the greatest sufferers from food deficiency diseases during the last World War and following it. In January and February, 1919, I saw many pale, undernourished children wearing paper clothes and paper shoes, trudging along over snow and ice covered streets in a number of German cities and villages. Not one of them could remember when they had milk to drink. They also had been deprived of citrus fruits for several years. As a result tuberculosis, rickets and infantile scurvy prevailed to an alarming extent among children all over Germany.

Adults in Germany also suffered from the lack of foods during and after World War I. The jolly, overweight, ruddy cheeked German adults, whom I had seen in Germany while doing postgraduate work in Berlin in 1906, had disappeared. All the German men and women with whom I discussed food conditions, complained bitterly of semi-starvation. Many of them had lost from 20 to 75 pounds in weight. They were pale, evidently anemic, and said they were weak and unable to work. All classes of Germans suffered much from skin diseases, partly because of a deficiency of vitamin A, and partly from lack of cleanliness, due to the fact that fats for making soap could not be had in Germany.

WAR BEER IN GERMANY

One of the major causes of dissatisfaction among adults in Germany was because of the poor quality and increased cost of beer. Some said: "The beer is dirty water and does us no good." Evidently the beer in Germany during and after the war had low alcohol content. It was necessary to divert the use of barley from brewing beer to making bread. German physicians said that one of the compensations from the diminished consumption of beer, and other alcoholic beverages, was a decrease in the disease associated with obesity, including diabetes, chronic nephritis and arterio-sclerotic heart disease.

NO PELLAGRA IN GERMANY

Having been interested in pellagra for many years I inquired particularly regarding the prevalence of that disease, now known to be due to a deficiency of nicotinic acid, one of the factors in vitamin B. German physicians, including dermatologists, said that all the infectious diseases of the skin had increased enormously during and after the war, but none of them had seen any case resembling pellagra.

German war bread was made largely of ground whole barley, beets, turnips, and other tubers. It was black, tough and unpalatable—barely edible—but it contained the various factors in vitamin B. The Germans are good truck gardeners and even at the end of the war they had plenty of vegetables, which are rich in vitamin B. No doubt there were vitamin B deficiency diseases in Germany, but they did not prevail to the same degree as did tuberculosis, rickets and scurvy due to deficiencies of vitamins A, D, and C, respectively.

---

*Address delivered at the meeting of the Central Medical Society, Jackson, Mississippi, January 6, 1942.

THE FATAL MISTAKE OF KILLING MILK CATTLE TO SUPPLY SOLDIERS WITH BEEF

The Germans made the mistake in the last war of killing their milk cattle to supply beef for their fighting men; and as a result they deprived the civilian population, particularly their children, of the most essential nutrient for the human body. Among the humane acts of France, Great Britian, the United States and their allies after the World War was to send milk cattle to their defeated foes, who had murdered thousands of undefended old men, women, and children in their air raids over Paris and London.

The miserable conquered Germans who cried *kamerad* when the fighting became hard, were arrogant, though half starved after the last World War; and they showed no signs of gratitude for the generosity with which they were treated at Versailles, where the fairest peace treaty was ever made in Europe was consummated in 1919. The idea that the Germans were treated unfairly at the Paris Peace Conference and by the League of Nations is pure fiction, manufactured for propaganda by Hitler and the isolationists in the United States. Is any one now so stupid as to doubt that Hitler's war is one solely for conquest?

UNDERNOURISHED GERMANY

Knowing something of the food conditions and nutritional diseases in Germany in 1917, it is difficult for me to believe that the nutrition of the German people at the beginning of World War II was as good as when they began their effort at world conquest in 1914. Dr. Tom Spies of Birmingham and Cincinnati, who was in Germany shortly before the present World War began, said that he saw many evidences of food deficiencies among the Germans at that time. Others have made similar observations. William Shirer said last Saturday night, (Jan. 3, 1942) that the Germans suffered from the lack of food in the winter of 1940 and 1941; and that the food and clothing shortage in Germany is more acute this winter.

Granting that the German people were well nourished in 1939, which I do not believe—thanks to the British Navy—they have been prisoners in Europe for two years, therefore they have not had an adequate milk supply to protect them against tuberculosis and rickets, and they have not been able to get sufficient citrus fruits to protect them against the various manifestations of scurvy.

STARVING CONQUERED COUNTRIES

It no doubt is true that the Germans have robbed the countries which they have conquered of meats, dairy products, wheat, barley, and other cereals, and fruits; and that the inhabitants of Czechoslovakia, Poland, Norway, Denmark, the Netherlands, France, Yugoslavia and Greece have been robbed to starvation; but even so, that food supply has been exhausted by this time, and those countries will not ever again supply much food to the despised Germans.

According to reports from Denmark, the Netherlands, Belgium, Norway, the dairy countries, the Germans have commandeered milk cattle for beef for German soldiers. If so, the Germans will suffer from the lack of milk as they did in the last World War. Even if the Dutch, Norwegians, and Belgians wanted to supply Germany with milk and butter fat, they have to import food stuff for their cattle from Great Britain and the United States and it is probable that the quantity of dairy products on the continent of Europe has been reduced by at least seventy-five per cent. It seems probable that the supply of poultry and eggs has had, or will have, a corresponding decrease. It therefore seems probable—I think certain—that in one or two years the Germans will be so undernourished and will suffer so much from starvation, that they will rise up and destroy those who have led Germany into another futile war of conquest.

FEEDING GERMANY

The German people not only are suffering at this time, and will suffer more in 1942 and 1943 from lack of nutritious food; they will be deprived of warm clothing. In the last World War the Germans sacrificed their source of wool supply by killing their sheep for meat for their soldiers. Besides, Europe cannot supply herself with wool and Germany cannot get cotton. Already the Germans have taken blankets from the beds of Norwegians to send their freezing soldiers in Russia.

Douglas Miller in an excellent article in "What It Cost Hitler" in the September number of *The Atlantic Monthly* estimated that even in the winter of 1941 and 1942 there is a shortage of clothing and blankets in Germany, and that by the winter of 1942 and 1943, civilians will have to wear paper clothes as they did the last two years of World War I. In January and February of 1919 the only clothing in the stores of a number of German cities were made of paper. It should be said that the Germans showed great ingenuity in making shirts and clothing of all kinds out of paper.

In 1919 the Germans could not get leather for any purposes and they had to wear paper shoes. Some of their paper shoes were water proof and were fairly durable, though they could not compare in durability with leather shoes.

Reports from Germany and Switzerland seem to show that only the rich Germans can buy fuel for heating their homes; and the masses will suffer from cold this winter as never before. As a result, colds, flu and pneumonia will play fearful havoc among the German people this winter. A press dispatch from Switzerland last Sunday (January 4, 1942) states that coke shipped from Germany sells for forty-two dollars a ton.

THE END OF HITLER AND PEACE

From the facts presented it is evident that the German people will have to suffer because of their villainous and insane leaders. How long they can be misled by Goebbel's propaganda no one can say, but when men and women get hungry, cold and sick and when they see their children suffer from malnutrition, they will begin to think for themselves; and then they will wreak their wrath upon those who have wrought such disaster upon their Fatherland.

Although all the avenues of public information available to the German people, including the newspapers, magazines, books and the radio, are engaged in propaganda to keep up the morale of the Germans, no doubt the loss of between one and two million soldiers in Russia, the cream of the German Army, is making other millions mourn in Germany. Weeping mothers and fathers, brothers and sisters, cannot be made to believe that the Germans are winning the war; and the rift between Hitler and the General Staff of the Germany Army is not helping der Fuehrer's prestige among his suffering soldiers. So with defeat by the Russians, and its consequences, and starvation facing the German people, the year 1942 has an auspicious beginning for the Allies and for all humanity.

The exact date of Hitler's downfall cannot be predicted; but a reasonable guess is that the end of World War II will come in 1943; and then the United States will play a large part in bringing about an enduring peace for all the nations of the earth. We shall suffer much in the meantime, while the Japanese are being disposed of, but not so much as the Germans will have to endure. Surely the sacrifices of the American people to destroy Hitlerism, and promote permanent peace seem small when compared to the ends which will be attained.

THE FOOD FACTOR IN WINNING BATTLES IN WORLD WAR I.

No doubt Germany would have won World War I had it not been for the aid given by the United States in supplying England, France and Italy food for their civilian populations and for their armies. I was told by Italians qualified to know that after the Caporetti disaster in 1917, in which the Italian soldiers were routed and ran like sheep until safe beyond the Piave River, Italy was suffering so much from lack of food that she would have made a separate peace with Germany and Austria-Hungary had it not been for the timely arrival of two Red Cross ships laden with food from the United States. The arrival in England, France and Italy of large supplies of all kinds of foods in 1917 and 1918 not only improved the health conditions but kept up the morale of all classes in those countries while the Allied Armies in France were winning battles against the inadequately fed and poorly nourished German soldiers.

Napoleon's hackneyed phrase "an army moves on its stomach" applied in France in 1918. The 2,000,000 American soldiers in France in 1918 were the best fed and the soberest fighting men who ever fought on European soil. In Cantigny, Belleau Woods, Chateau Thierry, San Mihiel and in the Argonne-Meuse district American soldiers won battles that finally won World War I for the Allies. Likewise the French and British soldiers won great victories, partly because they were better fed and had better morale than the armies of Germany and Austria-Hungary.

In October, 1918, I saw 5,000 German prisoners lined up on a street in Rheims the day they were captured by the French. They were half-starved, bedraggled and miserable looking. The only food given these 5,000 prisoners by the French on that day was a half loaf of black French bread for each soldier. The German prisoners also were given water which they drank as they ate greedily the unpalatable French bread. No doubt the German prisoners were given better food after they were placed in French prison camps. There can be no question but that the morale of the German and Austria-Hungarian armies was broken partly by lack of nutritious food, a fact which accounted for their willingness to surrender in large numbers without making resistance to the Allied armies.

The food factor has played an important role in keeping up the morale of the British in England and Scotland for the past two years. No finer demonstration of courage and willingness to make sacrifices for home and country has been recorded in history than that shown by all classes of Englishmen during the war with Germany. Certainly the fact that American food was arriving daily in larger and larger quantities was stimulating to the harassed population of England, Scotland and Wales.

While food has been more or less plentiful in England, and the supply increasing, the food situation in Germany grows from bad to worse. As malnutrition and food deficiency diseases increase in Germany the German morale will grow weaker until in a year or two, probably during the winter of 1943, the last desperate effort at world conquest by the Germans will have collapsed.

THE FOOD FACTOR IN DEFEATING JAPAN

In spite of the general impression that the Japanese require very little food, malnutrition and deficiency diseases may become an important factor in the defeat of imperialistic Japan. A recent article states that the Japanese subsist upon rice, fish, and a few vegetables; and that the "tight little island" of Nippon supplies its inhabitants with all the food they require. In this article it was intimated that the Japanese soldiers and sailors could starve and fight too. This statement is contrary to all the known facts about nutrition of the human body, and the Japanese in spite of bestial qualities are human beings.

I have no personal knowledge of food conditions and deficiency diseases in Japan but certainly at one time the Japanese suffered frightfully from beriberi, a fatal disease of the nerves, due to deficiency of vitamin B_1. The Japanese Navy was said to have been impotent in the Russo-Japanese war because of this malignant disease. At that time Japanese naval officials observed that British sailors were free from beriberi, and when they substituted British rations for the food given the Japanese sailors, the latter ceased to have beriberi.

Thirty years ago beriberi was a scourge among the Japanese, Chinese and the East Indians. In 1911 Casimir Funk, working in the Lister Institute in London, proved that beriberi is a deficiency disease caused by eating white rice. When whole grain rice was substituted for white rice, beriberi almost disappeared in the countries in which previously it had been the cause of a large proportion of the illness and deaths.

The fact seems to be that what might be called the normal state of nutrition for the Japanese is on the borderline to beriberi and other deficiency diseases. If so, when the American and British blockade of Japan becomes effective as it will in a few months, and the Japanese cannot fish in waters surrounding the island of Nippon, their principal source of proteins will be cut off to a large degree. Likewise agriculture on the island will be interfered with so that the Japanese rice and vegetable crops will be reduced very materially. It, therefore, seems that with even a slight reduction in the food now available to the Japanese, their morale will be lowered and the fighting qualities of their soldiers will be reduced to the point where the disillusioned little Japs will overthrow the military clique who carried them into war, and beg for peace.

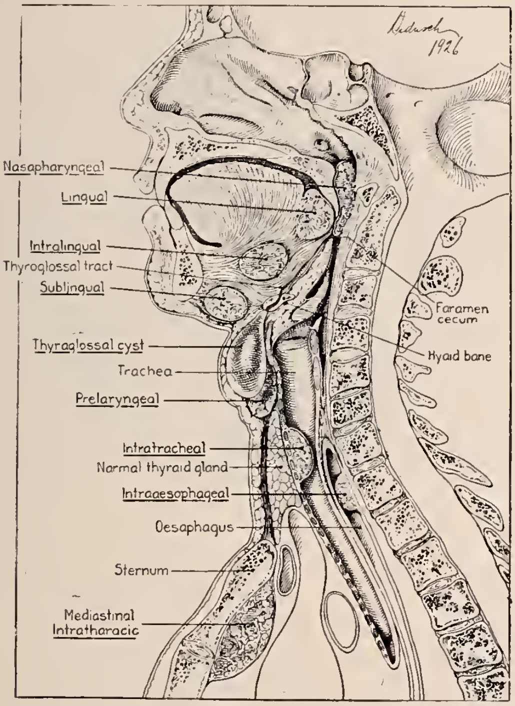
Certainly American soldiers are the best nourished fighting men in the world and they can be expected to carry on the war to victory.

Rationale for Treatment of Thyroid Disease*

DRS. V. B. PHILPOT and JOHN D. DYER
HOUSTON, MISSISSIPPI

IN THIS PAPER we shall attempt to discuss the rationale for the management of thyroid disease on the basis of embryology, pathology, and physiology of the thyroid gland. The subject of thyroid disease is a highly debated one on which the opinions of the best men in the country probably vary more than on any other disease. It is also a disease on which our opinions are constantly changing as our experience increases. All of this means that we are still learning about the thyroid and that we still have much to learn.

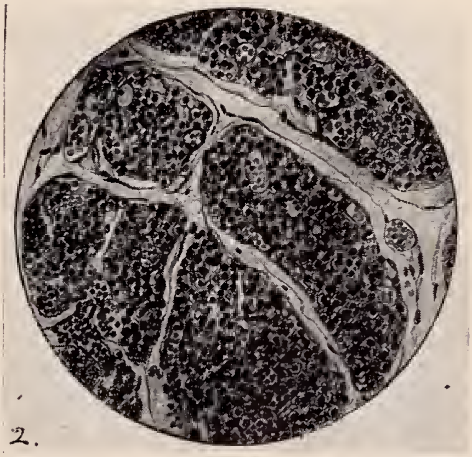
The thyroid gland is developed as a downgrowth from the ventral wall of the pharynx between the first and second pharyngeal pouches. This explains why there may be anomalies of the thyroid at any place from the back of the tongue down into the chest. In its descent downward the thyroid may stop before it reaches its normal location or it may descend past this normal location.


Didusch
1926
Nasopharyngeal
Lingual
Intralingual
Thyroglossal tract
Sublingual
Thyroglossal cyst
Trachea
Prelaryngeal
Intratracheal
Normal thyroid gland
Intraoesophageal
Oesophagus
Sternum
Mediastinal
Intrathoracic
Foramen cecum
Hyoid bone

No. 1.—Diagrammatic drawing to show the regions in which true aberrant thyroid tissue may occur in the midline. The tumefaction in the nasopharynx, although it would seem a *priori* to be an embryological impossibility, occurred in one case on the Laryngological Service in the Johns Hopkins Hospital. The clinical diagnosis was angioma, but the microscopical sections revealed thyroid tissue.

Diagram No. 1 shows the normal descent of the thyroid. It begins from the ventral wall of the pharynx and descends, normally coming to rest in the lower neck anterior to the trachea. The various locations are demonstrated where the thyroid may come to rest and thus produce an anomaly.

Grossly, the fetal thyroid shows a remarkable degree of lobulation. Microscopically, it consists of an undifferentiated mass of embryonic cells. As age advances these cells become grouped around acini. In early life the interacinar tissue makes up the greater part of the gland but as age advances the acini approach more and more upon it till very little of the interacinar tissue remains. Thus, there is a gradual transition from the fetal to the adult type of gland. Diagrams 2 and 3 show the fetal and the adult types.



No. 2.—Fetal thyroid. The cells are arranged in solid lobules, with no attempt at the formation of acini. (From Boyd's Surgical Pathology.)

The acinus is the key to the function of the thyroid. The cells of the acini are the makers of the hormone. Their lumina is the warehouse where it is stored. When the gland is in a resting state the acini are distended with dense colloid material and the lining cells are low cubical, or are flattened. When the gland becomes active there are three processes which may take place. They are hypertrophy, hyperplasia, and involution. Hypertrophy takes place by the epithelial cells lining the acini changing from low cubical to high columnar. Hyperplasia occurs by the cells lining the acini actually increasing in number and thus becoming more than one layer deep. At the same time, the colloid is absorbed and a thin semi-fluid substance replaces it. The blood supply is increased and the interacinar tissue may be increased. This causes an increase in size of the gland and thus a goiter. Involution occurs when iodine is given. It is a reversal of all the above activity. Hypertrophy and hyperplasia disappear. The lining cells revert to the low cubical type and become only one layer thick. If there has been only mild activity it may be possible for the gland to return to a normal appearance. If the activity has advanced very far it is impossible for the thyroid to return to a normal appearance. Permanent evidence of this will be wide variation in the size of the acini with old papillary processes remaining and also the increased size of the gland.

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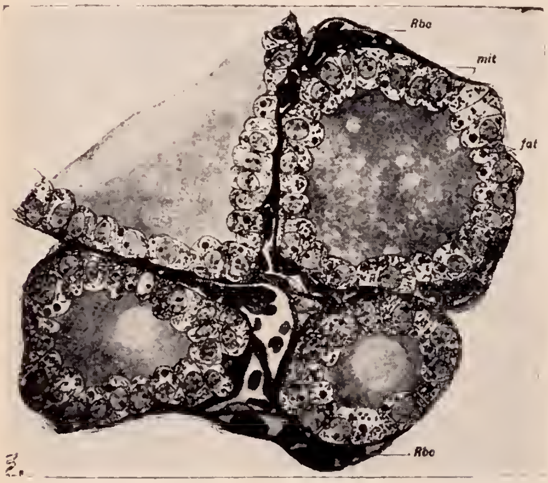
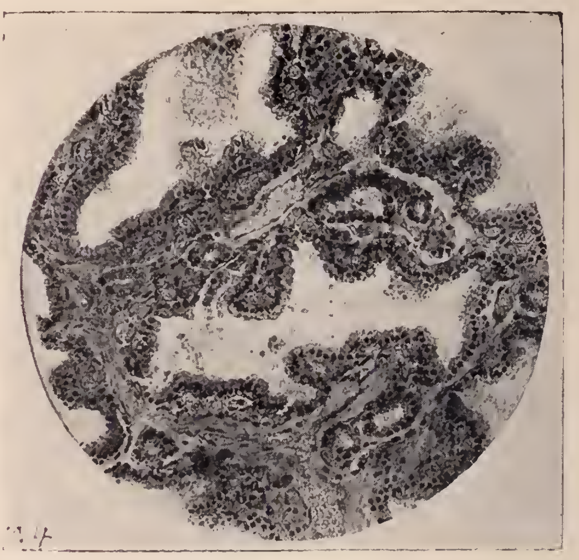
*Chairman's address at opening of the Section on Surgery, Mississippi State Medical Association, Gulfport, Miss., May, 1941.



No. 3.—Section through several follicles of a human thyroid: *mit*, Mitochondria; *fat*, small fat droplets; *Rbc*, red blood corpuscles. Aniline acid fuchsin.

This diagram demonstrates the changes which occur in the acinus with activity. The first is the fetal type of acinus. It is small and contains very little colloid. The second is the normal acinus in the adult type of gland. One observes that it is filled with dense colloid material and that it is lined by a single layer of low cubical cells. The third is the same acinus after the gland has become active. The lining cells have changed to high columnar and the dense colloid has been replaced by a thin semifluid substance. In the fourth the activity is subsiding, evidenced by the return of the colloid and decrease in height of the lining cells. The last shows the acinus after complete involution has occurred. It is greatly enlarged, is filled with dense colloid, and is lined by a single layer of flattened cells. Diagram No. 4 demonstrates an active exopthalmic goiter, No. 5 an old colloid goiter.

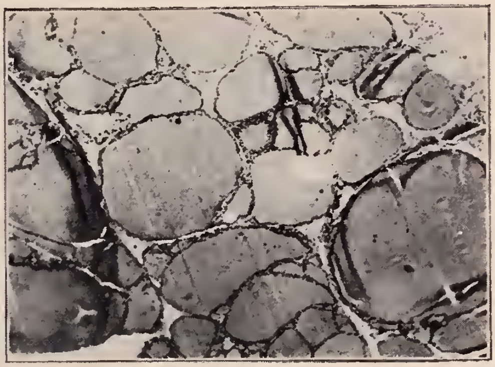


No. 4.—Exophthalmic goitre. Alveoli are irregular in form, lined with columnar epithelium, and almost devoid of colloid. The stroma is increased in quantity.

Classification of thyroid disease is still very unsatisfactory. A classification based on etiology would probably be the best, but we do not know the etiology of many thyroid disorders. A classification based on anatomy is of very little value to the clinician since we often find different histologic pictures in different parts of a single thyroid. Neither is a purely physiologic division into lesions accompanied by hyperfunction, normal function or hypofunction adequate.

Dr. J. A. Means, who is professor of clinical medicine at Harvard University, has given the following classification:

Simple Goiter: Endemic, epidemic, sporadic, iodine-deficiency disease, colloid goiter.



No. 5.—Colloid goiter. The acini vary greatly in size and are filled with dense colloid. Then lining epithelium is flattened. X 75.

Hypothyroid States: 1. Adult myxedema—Gull's disease
  2. Juvenile myxedema
  2. Cretinism
    a. endemic
    b. sporadic
  4. Cachexia strumipriva

Toxic Goiter: 1. Exopthalmic or Grave's type
  2. Plummer's type—"Toxic adenoma or adenomatous goiter with hyperfunction"

Inflammation of the Thyroid: 1. Acute thyroiditis
  2. Chronic thyroiditis (several types: Riedel's, Hashimoto's and so forth).

Neoplasms of the Thyroid: 1. Benign (adenomata of various types)
  2. Malignant:
    a. carcinomata
    b. sarcomata
    c. lymphomata

Anomalies of the Thyroid: 1. Thyroglossal tract remnants
  2. Lateral, intrathoracic and other aberrants. This classification seems to cover the field very well, but it is evident that there is much overlapping.

The most popular classification of goiter at the present time is the following:

Toxic diffuse goiter, non-toxic diffuse goiter, toxic nodular goiter, non-toxic nodular goiter.

This is very simple but is inadequate in that it is based only on the gross appearance of the goiter and its activity.

It is convenient to divide the signs and symptoms of disorders of the thyroid gland in the following manner: 1. Symptoms due to alteration in function:
    a. hyperfunction
    b. hypofunction
  2. Local symptoms
  3. Constitutional symptoms not due to altered function. (For example, fever from thyroiditis)

We are all familiar with the picture produced by hyperfunction of the thyroid and therefore it does not need to be gone into in detail. It will suffice to say that it is the picture of increased metabolism plus an extreme nervous state. The picture produced by hypofunction is just the reverse. It is the result of lowered metabolism.

It is convenient and proper to divide the treatment of disorders of the thyroid gland in the same manner as signs and symptoms were divided; that is, treatment for hyperfunction and treatment for hypofunction. The treatment in hypofunction of the thyroid gland is thyroid therapy. In dealing with hypothyroid states, it is extremely important that an early diagnosis be made. The thyroid hormone is a vital factor during the growth period as the development of the body and mind are retarded when it is absent. By giving thyroid therapy the growth can be continued normally. Distinction should be made between cretinism and juvenile myxedema. The cretin has suffered from the lack of a thyroid during his intrauterine life, while a case of juvenile myxedema has lost the function of his thyroid in childhood. Thus, the juvenile myxedema offers a better prognosis and if treated properly, may never cause any bad results even though the patient may have to take thyroid for the remainder of his life.

The choice of treatment in hyperfunction or toxic goiter is subtotal thyroidectomy in the fully iodized patient. Iodine is a necessary ingredient of the thyroid hormone and a variation in the supply of it will profoundly alter the activity of the gland. Iodine deficiency usually causes parenchymatous hyperplasia and withdrawal of stored hormone from the gland. Opinions differ concerning the iodine response in toxic goiter. Some believe that only Grave's type gives a good iodine response. However, such leading men as Graham, Culter, Youmans, Kampmeir, and Means believe that the type of toxic goiter does not determine the iodine response. The question of a goiter becoming iodine fast is also a subject of much controversy. Means does not believe that it is possible. In his opinion, intensification of thyrotoxicosis under iodine represents the natural course of the disease. Were iodine not given at such times, the intensification would be still greater. In discussing the hypothyroid state, we insist on early treatment. The same applies to the hyperthyroid state. As hyperthyroid continues, permanent damage is done, which is not cured by thyroidectomy. The thyroidectomy brings the disease to a stop, but does not repair damage, which has already occurred. Thus, the solution is to treat the condition early before it has time to progress. As we have already stated, the choice of treatment in toxic goiter is subtotal thyroidectomy in the fully iodinized patient. The low death rate of present day surgery is due to the use of iodine, made popular by Plummer a number of years ago, and for this reason it should be omitted.

Complications are very important in toxic goiter. We shall, therefore, mention some of the most outstanding. The principal ones to be looked for in the preoperative group are toxic crisis, cardiac insufficiency, psychosis, diabetes mellitus, hepatitis and throat infections. In the postoperative group, we have hemorrhage, wound sepsis, laryngeal nerve injuries, hypoparathyroidism and toxic crisis.

Lymphogranuloma Venereum

R. H. DeJARNETTE, M.D., M.P.H.
Director, Alcorn County Health Department
Corinth, Mississippi

In talking about lymphogranuloma venereum, I shall make no attempt to discuss in detail this disease. I have reviewed some of the literature on it, but by no means all of it, since in the last few years there have been literally hundreds of articles published on lymphogranuloma. I am beginning to believe that in this disease we have a condition which may be as prevalent as syphilis and may be almost as protean in its manifestations. The main purpose of my paper is to discuss a few cases of lymphogranuloma which we have recently found in our venereal disease clinics. However, a brief review of the disease itself might be helpful.

Etiology. Lymphogranuloma venereum, also known as lymphogranuloma inguinale, lymphopathia venereum, and tropical bubo, has been definitely proved to be due to a virus. This virus has been successfully grown on chick embryo and mouse brain and has been proved capable of transmitting the disease to man as well as animals.

Frequency. The frequency of lymphogranuloma is not definitely known. In the classical form such as we studied in medical school of the multiple draining sinuses from the inguinal glands, it is rare. We seldom see this form of lymphogranuloma, but the Frei tests done on various groups of people have shown that the disease is much more prevalent than has been formerly thought. Lymphogranuloma is primarily a venereal disease and naturally is found in sexually promiscuous individuals to a large extent, but has been seen to occur through other than sexual contact. Quite a number of cases of lymphogranuloma has been reported in small children, and accidental infections among doctors, nurses, and laboratory workers are not rare.

Clinical Manifestations. The clinical manifestations of lymphogranuloma are quite varied, and in the literature each month we find more and more symptoms thought to be due to this virus. The usual symptom at the beginning of the disease is a small ulceration which may disappear in a very few days or may remain for several weeks. It is not infrequent that this lesion recurs, but as a rule not in exactly the same place as the original lesion. It appears that lymphogranuloma is a systemic disease and not as was formerly thought a purely local disease. During the course of the disease in a number of cases there is a cutaneous eruption resembling erythema nodosum or erythema multiforme. In some series of cases it has been reported that these eruptions occur in from three to ten per cent of the patients with lymphogranuloma. Headaches quite frequently occur, some fever, and in severe cases the patient may be quite ill. One of the frequent manifestations of the disease is a swelling of the inguinal lymph glands with or without suppuration. There occurs rarely a generalized lymphadenopathy. Another very frequent manifestation is a benign rectal stricture. It has been stated that about 99.9 per cent of the benign rectal strictures are due to lymphogranuloma. Other manifestations, which according to the literature are not rare, are ocular manifestations. These may result in conjunctivitis, iritis, episcleritis, etc.

DIAGNOSIS. At the present time the only practical method of positive diagnosis is the Frei test. The Frei test has been used since about 1925, but has not been commercially available until quite recently, due to the difficulty in its preparation. At the present time the Frei antigen is on the market and is being sold by E. R. Squibb and Sons. This is a reliable preparation. It is given in .1 cc. intracutaneous doses. Any reaction is interpreted after a lapse of from 48 to 72 hours, and it is stated that a papule of more than 6 mm. constitutes a positive test. We have found that in several patients the reaction covers an area of one to two inches and remains positive for several weeks. These patients had evidently developed a strong sensitivity to the Frei antigen.

TREATMENT. A long list of drugs has been used in the treatment of lymphogranuloma, but none has been found to be satisfactory in all cases. Antimony and potassium tartrate, or fuadin, have apparently given good results. Lately a Frei antigen given in repeated doses has been claimed to give good results. Of the sulfonamides, sulfanilamide, sulfapyridine, and sulfathiazole, have all been used with apparently good results. The following cases illustrate a few of the points brought out above. All of these cases were seen by us in the Alcorn Health Department venereal disease clinics.

CASE NO. 1 M.C., colored, female, 34, was receiving treatment for syphilis in the health department. On January 3, 1941, she complained of an obstinate constipation for the past year which had continually grown worse. There was at times some mucopurulent discharge from the rectum. Upon examination is was found that she had a stricture of the rectum which barely admitted the tip of the index finger. A Frei test was given which was strongly positive. She was given sulfanilamide, 30 grs. per day, and the stricture was manually dilated once each week. This patient was irregular with her treatments, at times not taking the sulfanilamide for three or four days and then resuming the treatment. She was seen last, on February 18, 1941, at which time she stated that she was considerably improved; that her rectal discharge had subsided and her constipation had been relieved.

CASE NO. 2. The above patient's husband was given a Frei test which showed a strongly positive reaction. This patient was given a thorough examination, and no signs or symptoms of the disease could be found. He was not given treatment.

CASE NO. 3 L.C., colored, female, 46, was found in jail with a positive Wassermann. When examined here, she complained of pains in abdomen and obstinate constipation for the past year. This patient stated that she had not had a normal bowel movement for one year; that her bowels moved only after taking a purgative which she did about once every week. On examination it was found that she had a complete third degree laceration which had never healed, with a stricture which almost completely obliterated the rectal canal about two inches above the rectal opening into the vagina. The Frei test given at this time was strongly positive. The patient was treated with sulfanilamide plus manual dilatation of the stricture. On February 25, 1941, the patient stated that her constipation had improved a great deal. Treatment was then discontinued, and on May 5. 1941, the patient reported that it was no longer necessary for her to take laxatives. An examination was not done at this time.

CASE NO. 4. J.W.J., colored, male 21, had been under treatment for syphilis, having had about sixty shots. On March 7, 1941, this patient complained of swelling of the right inguinal gland which upon examination was found to be fluctuant in one place. The patient was given a Frei test which was strongly positive. The bubo was lanced by a private physician a few days later and the patient was given some tablets which he reported he was taking regularly. On questioning this patient, it was found that he had a very small penile lesion a short time previous to his developing the bubo, and this lesion had gone away without treatment in about three days. This patient gave as the source of his infection:

Case No. 5. N.L.M., colored, female, 22, who was a patient in the syphilis clinic. She was given a Frei test on April 8, 1941, which was also positive. This patient has not been given an examination since the finding of this positive Frei test to determine if there are clinical manifestations.

Case No. 6., colored, male, 31, first reported to the venereal disease clinic, July, 23, 1940, on account of a positive Wassermann. At this time he was complaining of a diarrhea, which he stated that he had had for about one year. He was told to visit his private physician for treatment for the diarrhea but never did so. On February 14, 1941, he was given a second examination at which time he was found to have some condyloma around the anus, and he stated that his diarrhea was no better; that his bowels moved from six to eight times each day, quite often there being only a small amount of mucopurulent material passed. Rectal examinations revealed a definitely tender mucosa but no stricture. The Frei test on this patient was strongly positive. He was given sulfanilamide, which he continued regularly for one month. The patient states that now he has only one or two bowel movements per day of a fairly normal constituency.

Case No. 7. E.S., colored, female, age unknown, reported to the clinic March 25, 1941, complaining of leukorrhea, right knee and ankle swollen and painful. On examination this patient was found to have a draining ischiorectal abscess and mild stricture of the rectum. Her Frei test was positive. A Wassermann taken was positive, also. This patient was given sulfanilamide, 30 grs. per day, which she continued for about two weeks, then disappeared from the clinic and has not been seen since. Out of the patients referred to us by private physicians for Frei tests, several have been found positive, but an examination was not done by us, so that no information as to their clinical condition or treatment is available.

I believe that the above cases serve to illustrate that we do have a large number of people with lymphogranuloma venereum in our population. The symptoms of this disease may so closely simulate other conditions that unless the Frei test is used, the condition may be very easily confused with some other disease.

Pat, a truck driver, stopped suddenly on the highway. The car behind crashed into the truck and its owner sued the Irishman. "Why didn't you hold out your hand?" the judge asked Pat.

"Well," he said indignantly, "If he couldn't see the truck, how in hivin's name could he see my hand?"

The Management of Mental Cases in Private Practice*

E. S. SLEDGE, M.D., F.A.C.P.
MOBILE, ALABAMA

THE STRESS and strain of living has increased rapidly in recent years; our ability to withstand stress has developed proportionately. As a result functional diseases of the nervous system have become an ever-growing problem to the practitioner of medicine. And those offering the greatest difficulty for classification and management are the frank psychotics. Intelligent management of these people necessitates in each study as careful as can be made under the circumstances. And the first approach should be made reference to the "stuff out of which the patient is made." Too much stress cannot be laid on this, as here most often lies the solution of the problem.

The family history is a simple matter in many instances where the investigating physician is the family doctor. When this situation does not pertain, the gathering of this information may not be so easy. But knowledge of the family trends is of prime importance in making as good a classification of the case as possible. And the accuracy of the classification is of profound importance in prognosis and in deciding on the line of treatment. Many of these patients have no more than a simple stress reaction; others will have this with an underlying schizophrenia or manic-depressive psychosis or paranoia. The increasing strain under which we all live has lowered the threshold of stability; this factor makes the simple stress-reaction more common, especially where the family history is good or shows nothing more than a trend to instability. In this connection I am reminded of a remark several years ago by Dr. W. D. Partlow. superintendent of the Alabama Hospitals for the Insane. He was asked whether or not a history of mental disease in the family was the cause of mental disease in the patient. He expressed the opinion that it was not the cause, but it was a good basis for explaining the development of mental disease in the patient. And that represents a very nice distinction.

A careful diagnostic study should be made in each psychotic individual. The disturbed mental state may be due to physical disease or may be exaggerated thereby. We are all familiar with what syphilis or pellagra may do. Recently I saw a case of delirium-confusion due to a severe thyrotoxicosis from a toxic adenoma of the thyroid. About a year ago I saw a patient that appeared to be developing a paranoia get well with improvement in her pernicious anemia. It is easy to become so absorbed with the mental manifestations that we overlook physical findings; the surgeons will attest to the reverse where the mental manifestations are ignored for the physical. Therefore no line of management for the psychotic can be formulated intelligently and for the best interests of the patient without due and proper regard for turning the light on physical disease and directing proper therapeutic activity thereto. It would seem that the most frequent explanation of ignoring the physical condition of the psychotic is that so often the patient's disturbed mental state and physical restlessness induce too great a hurry in making some disposition of the patient. It must be remembered that most people dread mental disease and are afraid of the patient who manifests the symptoms of mental disease. And when done the diagnostic study should be as thorough as equipment and the means of the patient justify.

The circumstances or surroundings under which the patient is to be managed is of prime importance. These patients are irresponsible; they must be protected from their own folly and others must be protected from the patient's folly. It is here we see the importance of the family history, the patient's previous history and the circumstances under which he or she broke down, due consideration being given to the patient's physical state. The simple stress reactions may well be treated at home by bed-rest, quietude, careful sedation and physical up-building. The same principles apply to managing such cases in a general hospital. It has been my experience that the greatest trouble with the general hospital is the noise. However it is well not to be in too great a hurry to make any disposition of the nervous or mental patient. There are so many border-line cases that are so close to the margin of normalcy that many of them clear up promptly with the most simple measures.

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*This was read at the regular monthly meeting of the Lauderdale County Medical Society, which was held at Hoye's Sanitarium, Meridian, Miss., July 17, 1941.

Excited patients represent the most difficult problem. It is a great mistake to attempt to deal with an excited psychotic at home or in a general hospital by over sedation or physical restraint. A manic-depressive patient may remain sick a much longer period of time by reason of such management; not so much effect is had on the schizophrenic. These patients should be put in a hospital that is properly equipped in personnel and matérielle for the care of such people. That brings up the old question of the private versus the state institution for the treatment of mental cases.

Personally I prefer that my patients be given first a trial for a reasonable length of time (a few weeks) in a good private institution. Of course this is contingent upon the availability of sufficient means to finance the venture. There is a stigma connected with a patient being committed to a state insane hospital, and feeling experienced on the part of the families must be given prayerful consideration. A considerable proportion of these patients get well in a few weeks in a private hospital. This is true principally of the simple stress reactions and the manic-depressives. The schizophrenics who respond well to shock therapy often get out in a shorter period of time.

If the treatment in the private hospital be ineffective after a reasonable time, then the patient can at any time be put in a state hospital for a more prolonged period of management.

No attempt is made here to go into any detail in the treatment of the individual case. Because of the increasing prevalence of psychoses, especially acute cases and border-line types, the above ideas are presented as a consideration of the problem as a whole.

How Long To Wait?*

A DISCUSSION OF SOME PROBLEMS IN INTERNAL MEDICINE

LOUIS K. LEVY, M.D.
Lieutenant in U. S. Naval Reserve,
SAN DIEGO, CALIFORNIA

FREQUENTLY during the course of the practice of medicine, regardless of any specialty, the physician is confronted with the question of how long to delay before making a definite diagnosis or reaching a decision as to the use of definite therapeutic measures. The individual problem quite often remains unsolved either due to a lack of accessible literature, highly conflicting opinions contained in the literature, or to a lack of opportunity to observe a sufficient number of representative cases to justify an individual opinion. The questions presented here represent a selected few that I have chosen from a practice confined to internal medicine. Only after a careful survey of the literature and evaluation of personal experiences with these individual problems, have my conclusions been reached.

How long to wait after a patient with mild diabetes has been placed on an "observation" diet before ascertaining whether insulin is required?

There are two methods employed in instituting therapy in the mild diabetic: 1) The patient is given an "observation" diet, that is, one that is prescribed as a gross qualitative restriction diet, or else a diet which is computed according to exact quantity of total calories, carbohydrate, fat and protein content estimated to satisfy the patient's requirements. Or, 2) The patient is placed immediately on insulin therapy in addition to dietary regulation. While the second plan is not harmful, it has the disadvantage of introducing the patient to an inconveniently administered drug which may not be eventually required. Too, I have found that if a patient is given a specific diet and told that if the diet is carefully adhered to that there is a strong likelihood that insulin may not be required, he is more likely to follow the diet carefully than if insulin is administered initially.

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*From the Department of Surgery of the University of Tennessee, Memphis. Read before the seventy-ninth semi-annual session of the Clarksdale and Six Counties Medical Society, November 12, 1941, by Dr. J. D. Biles, of Memphis, Tenn.

I employ the computed diet in preference to the one that is grossly restricted, for it eliminates variables. Furthermore, I feel that it makes the patient "diabetic conscious" with the concomitant more careful attention to his disease.

Those physicians who employ the "observation diet" tend to institute insulin therapy if the urine is not sugar-free or if the blood sugar has not shown a very marked drop to or near the normal fasting level within three or four days after treatment has begun. It is true that the most marked improvement in these laboratory findings is generally found to have taken place in this period of time; however, this does not necessarily mean that maximum improvement has occurred. Sometimes it will require a period as long as four to six weeks for the urine to become sugar-free, but this is the exception, because as a rule if the urine is to become sugar-free, it will do so by the end of three weeks, the usual time being about one to two weeks. One should delay until two weeks after instituting dietotherapy before considering the use of insulin. At the end of that time, if the urine contains sugar but evidence of progressive improvement is noted, one is justified in extending the observation time until a maximum of six weeks.

How long should one wait before making a diagnosis of "unresolved pneumonia?"

"Unresolved pneumonia" remains a very loosely employed diagnostic term because no one has attempted clearly to define the indications and limitations for the establishment of this diagnosis. Opinions seem to be rather evenly divided between those who refuse to recognize such a diagnosis, and those who commit themselves to this diagnosis frequently. Neither attitude is correct since true "unresolved pneumonia" does exist as a clinical entity, but it is of infrequent occurrence.

Barring the presence of malignancy, atelectasis, tuberculosis, relapse, empyema, or lung abscess, delay in clinical resolution of a pneumonic process beyond three weeks after the temperature has returned to normal may be considered an instance of "delayed resolution." The mechanism of delayed resolution is not clear. Usually delayed resolution, which itself is far from common, continues to complete resolution of the pneumonic process within a short time. If, however, clinically three weeks, and roentgenologically, five weeks, after the beginning of the period termed "delayed resolution" there remains evidence of lung pathology, then one is justified in employing the diagnosis, "unresolved pneumonia." Fibrosis begins in the inflammatory area approximately four to five weeks after the temperature has returned to normal, hence by the time it is permissible to employ the diagnosis of unresolved pneumonia, there may be a considerable area of fibrosis present in the affected lung area. The prospect of reduction in size or clearing of an area in which fibrotic changes have occurred is not good, therefore, an attempt to inhibit possible extensive fibrosis should be begun shortly after the diagnosis "delayed resolution" has been established. Lung exercise is the principal mean employed, but results have been far from satisfactory. Unresolved pneumonia may be a serious lesion if well-marked fibrosis occurs which favors the onset of bronchiectasis. If the area of fibrosis is extensive there may be a considerable reduction of vital capacity. Further, an area of unresolved pneumonia is an area of lowered resistance to reinfection.

How long to wait after gross bleeding from the bowel before obtaining a barium enema?

This is a situation that one is apt to encounter quite infrequently since it is restricted to lesions located above the range of endoscopic examinations. The danger, other than possible resumption of the bleeding, is the possibility of perforating an ulcerative lesion due to the pressure of the barium. Empirically I have found that a delay of seven to ten days after the occurrence of the hemorrhage is a sufficiently long interval to delay before proceeding with barium enema examination, but at the time radiographic study is done the barium should be introduced under low pressure and very gentle abdominal palpation of minimum amount should be employed.

How long after onset of marked jaundice should one wait before advising an exploratory operation?

Usually marked jaundice occurring before the age of thirty-five can be considered as an instance of acute catarrhal jaundice. After that age, the syndrome must be considered along with, and secondarily in importance to, stone in the common duct and malignancy involving the bile passage. Contrary to the belief of many physicians, acute catarrhal jaundice occurs far from rarely in persons beyond the age of thirty-five years; however, all will agree that it should be considered as being more in the category of an exclusion diagnosis in this age group. Excluding those cases in which by history, physical examination or laboratory studies, the diagnosis of stone or carcinoma is fairly obvious, the remaining cases may provide much difficulty in arriving at a decision as to whether or not operative intervention is indicated.

It is especially important to avoid exploratory operation in a jaundiced patient, because of the much greater risk entailed as compared with the nonicteric individual. This statement stands, even though the bleeding tendency is controlled with the use of vitamin K. The fact that a patient is beyond the optimal age for surgery is another factor demanding more careful deliberation.

Before arriving at a decision, the levels of intensity of jaundice should be observed by obtaining blood Van den Bergh unitage and icterus index measurements of the serum. If at the end of four, or at most five, weeks the intensity of jaundice has not shown a trend toward marked lessening, or if, at the end of two weeks after the onset, the jaundice is increasing in intensity, an operation should be advised. Evidence of jaundice may possibly persist eight or ten weeks after the onset of acute catarrhal jaundice but by the end of the period allotted, as stated above, it should have shown very definite signs of clearing in order to justify such a diagnosis.

How long to wait after instituting therapy for a gastric ulcer located in the prepyloric region before reaching a definite decision as to whether the ulcer is benign or malignant?

Opinions as to what percentage of ulcers located in the area of the stomach within one inch proximal to the pyloric ring are malignant have varied from about 20 per cent to almost 100 per cent. The fact remains, however, that an ulcer found in the prepyloric region must be viewed with a great deal of suspicion as to the possibility of it being malignant.

There are no single one or two absolutely dependable means of differentiating the benign from the malignant prepyloric ulcer. Either may be found in the old or young, associated with high or low hydrochloric acid values, and may improve under medical therapy. The x-ray can not be relied on to differentiate the two, however an extensive ulcer should be presumed more likely to be carcinomatous than not.

Evidence is sufficient to justify the opinion that where there is reasonable doubt as to whether an ulcer in the prepyloric region is malignant one should employ medical therapy and if marked symptomatic and x-ray improvement is not noted by the end of four weeks after instituting therapy, operation is advisable. Even if satisfactory improvement has been noted the ulcerated area should be kept under close observation for a considerable period of time thereafter.

CONCLUSIONS

Several common diagnostic and therapeutic problems encountered in the field of internal medicine have been presented together with the answers I believe to be correct. It is hoped that this article will serve as a stimulus for publication of similar material by men in the various other specialty fields.

The Upright Position in the Treatment of Heart Disease*

E. M. MEEK, M.D.
COLUMBUS, MISS.

IT SEEMS superfluous to talk about something so obvious as propping up a patient with heart failure. But try to find something written about it. Modern texts and current literature fail to emphasize it. People might have thought about this subject but, as Dr. Levine[1] of Boston says, they have not written much about it.

A fairly constant group of changes takes place when the heart decompensates.[2] There is an increase in the volume of circulating blood in both fluid and formed elements. There is decreased minute output of the heart. There is venous stasis with increased venous pressure, and prolonged circulation time. The vital capacity is reduced. The oxygen demand is increased as high as 25 to 50 per cent.[3]

It is these changes that cause the symptoms. Very few symptoms of heart failure originate in the heart itself, but are manifestations of congestion of the various organs, due to the failure of the heart as a pump.[4] An acutely congested liver can be so painful as to simulate a surgical abdomen. Congestion of the kidneys often causes albumen and casts. Congestion of the lower extremities causes them, at times, to swell beyond recognition. Congestion of the gastro-intestional tract causes persistent and severe dyspepsia. The most important symptoms arise, however, from congestion of the pulmonary system. It is here that changes take place that seriously endanger the life of the afflicted person. The engorgement of the lungs causes hyperactivity of the pulmonary-medullary reflexes with resulting cough, dyspnea, orthopnea, or cardiac asthma, as the case may be. There are some chemical changes in the blood that have some part in the chain of symptoms, but these are not as important as the changes that take place in the lungs.

Cough is often symptom of a failing myocardium. Indeed, it may herald the onset of paroxysmal dyspnea, or cardiac asthma. Cardiac asthma is due to sudden transient failure of the left ventricle with a damming back of the blood in the pulmonary circulation, where it becomes trapped. Even the compensation of the left ventricle is immediately restored and the stroke volume of the right and left heart is the same, the trapped blood remains in the lesser circulation and the dire symptoms of cardiac asthma remain until the excessive amount of pulmonary blood is eliminated.

Not all heart disease is manifest early by dyspnea. Examples are coronary artery disease, right ventricle disease, diseases of the pericardium, and pure tricuspid stenosis.

On the other hand not all dyspnea is due to heart disease. Dyspnea may be caused by exercise, obesity, disease of the pleura, diseases of the lungs, diseases of the bronchi, diseases of the mediastinum. Respiration consciousness, especially that accompaned by a compulsion to sigh, is a well known manifestation of psychoneurosis. The posterior mediastinal syndrome may be accompanied by severe dyspnea, and even trepopnea (dyspnea that appears on the patient's assuming certain positions[5]). At times, it is almost impossible to distinguish between cardiac dyspnea and bronchial asthma due to allergy[6]. Measure of the circulating time is a great aid in separating cardiac dyspnea from dyspnea due to other causes. Heart failure causes, as has been mentioned, a prolongation of the circulation time.[7] Thyroid heart disease, however, causes an accelerated circulation time.

Cardiac and non-cardiac causes may operate simultaneously to cause dyspnea. Cardiac asthma is, especially, likely to occur in cardiacs who have diminished elasticity of the lungs as in emphysema. Cor pulmonale is heart disease caused by lung disease.

Heart disease that is manifest by dyspnea and related symptoms, or is likely to be manifest by dyspnea, or related symptoms, is the indication for treatment in the upright position. The tendency to paroxysmal dyspnea is a rather urgent indication to keep the patient propped up.[8] Pulmonary engorgement with resulting cough, dyspnea, orthopnea, or cardiac asthma is prone to occur in hypertensive heart disease, heart disease due to coronary failure, aortic valve disease,[4] and less often, mitral valve disease. These are the types of heart disease that we commonly see in general practice. Thus, we should prop up practically all of our cardiacs.

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Of prime importance in treating our cardiacs is rest, especially in view of the fact that in exercise respiratory needs are increased—as much as ten times normal in severe exercise —and that in heart failure the oxygen demand is increased 25 to 50 per cent even at rest.[3] But let us be sure that by rest in bed we are not making worse the very symptom we are trying to eliminate—dyspnea. Let us be sure we are not increasing pulmonary engorgement. Some cardiacs demand to be propped up. Many can get more rest propped up than they can flat. Some can get no rest at all unless sitting up and leaning forward. There are a few who have no respiratory distress only when standing upright and immobile.[4]

The upright position is important for several reasons. Probably, the most important reason is a simple question of gravity, with an increased venous return from the legs when the patient is horizontal.[8] This increases the burden on an already burdened left ventricle, and adds to the pulmonary congestion, often to the extent of hydrothorax. The circulatory system is already too full of blood, but some of it is trapped in the legs in the form of venous stasis and edema. Both of these are relatively harmless in the legs, but pulmonary venous stasis and pulmonary edema make the prognosis much more guarded. The sudden influx of more fluid may carry the patient away before the beneficial effects of bed rest have allowed the heart to become strong enough to take care of the added strain.

The venous stasis in the legs is five or six times as great in the upright as in the horizontal position, has been well shown by the experiments of Mayerson[9] and the experiments of others.[10-11-12]

In heart failure there is a measurable decrease in vital capacity. In the horizontal position in normal persons the vital capacity decreased about 200 cc. and the total lung volume decreased over 300 cc. in the experiments of McMichael and McGibbon.[13] They attributed this decrease to increased congestion of the lungs. In patients with heart failure and already congested lungs and decreased vital capacity, the decrease in vital capacity on lying flat is probably much greater. In Dow's work,[14] there was a decrease of 223 cc. in vital capacity in the supine position. After application of blood pressure cuffs to the extremities and inflating these cuffs so as to cut off venous return, the vital capacity increased 140 cc. The congestion of the lungs was decreased due to the trapping of the blood in the extremities. This suggests that this method of bloodless venesection should be more often used in pulmonary edema especially when a patient is too anemic to tolerate actual bleeding.

Should we not hesitate to engorge further already engorged lungs and decrease further already decreased vital capacity by putting a patient flat? To do so is to help drown an already partially drowned person.

In McMichael's subjects,[13] normal people, there was an increase in heart output of 25 to 30 per cent in the recumbent position. This was due to increased venous return to the heart. A decompensated heart already has more blood dammed behind it on the venous side than it can well take care of. It certainly cannot respond to increased venous return, except by increasing strain and further decompensation rather than sustained increased output.

We have already noted that some patients with heart failure are comfortable only when propped up or leaning forward. Weiss[4] mentions that in the supine position a large portion of the lungs are below the auricles, giving a relatively high venous pressure in these parts of the lungs, while in the upright position very little lung tissue is dependent and in leaning forward the pressure exerted by the heart on the inferior vena cava helps shunt blood away from the pulmonary circulation. These factors markedly improve the dynamics of the pulmonary arterial tree.

Reid,[5] in studying orthopnea, suggests that the pressure exerted by an enlarged heart on the posterior mediastinal structures, including pulmonary veins and lung tissue, in the flat position further increases pulmonary engorgement. His 17 patients with orthopnea all had enlargement of the heart into the retrocardiac space. In 36 cardiacs without orthopnea only one had encroachment of the heart on the retrocardiac space. Some of his orthopneic patients were more comfortable leaning forward.

Bearing these facts in mind, especially those about the increased pulmonary congestion in the flat position, it behooves us to be careful about bed rest and the type of bed rest we give our cardiacs. So important is rest that most decompensated hearts compensate even when flat in bed because the beneficial effects of rest and other treatment offset the added strain imposed upon the heart by the flat position.[8] Not all, however, are that fortunate. Some get steadily worse on going to bed. Levine tells of cases with a few basal rales developing hydrothorax after a few days in bed. The edema from the legs disappears, but the fluid only runs from the legs to the lungs. This can happen even when there is only larval edema. A 58-year-old male patient of Levine's went steadily downhill following a coronary occlusion until he was put up in a chair. Harrison[8] has treated cases of paroxysmal dyspnea successfully by medication and letting them remain ambulatory.

The patients in whom the horizontal position is particularly dangerous are (1) elderly people, (2) patients with severe left-sided heart failure, and (4) patients who have cardiac asthma.

Paradoxic cardiac failure is dyspnea that appears in elderly patients, especially those with poor coronary circulation, for the first time after prolonged bed rest. Weiss[4] attributes this to the withdrawal of the stimulus of mild exercise to the ischemic myocardium.

Leplace and Nicholson[13] attribute the cause of death in 10 of 34 orthopedic patients over 65 years of age to confinement to bed. Lack of exercise caused circulatory stasis with local tissue anoxemia and degeneration resulting in toxemia and capillary damage. In all these elderly patients, whether they lived or died, dehydration, mental disturbances, and local cyanosis were common. There was little change in pulse rate, blood pressure, or arm venous pressure. Circulation usually became a little accelerated. There were no permanent changes in the E K G. Vital capacity showed little change, B M R was diminished a little, urea nitrogen was not constantly affected. Blood count showed toxemia, and bed sores were common.

In severe left-sided failure, when put to bed, the left ventricle is swamped by the increased venous return before it has time to regain compensation from rest and medication, and massive pulmonary edema is a most real possibility.[8]

Patients with paroxysmal dyspnea are often entirely comfortable during the day.[4] Attacks are most likely to occur at night while the patient is resting in bed. This often awakens the patient out of a sound sleep. Any attack may kill the patient. Night cough may be a forerunner of cardiac asthma. A patient with cardiac asthma has circulatory failure of the pulmonary system between actual attacks, as attested by diminished vital capacity and a prolonged pulmonary circulation time. Beware of the supine position in anyone with pulmonary congestion.

The upright position is indicated in all patients with left-sided heart strain or who are liable to have left-sided heart strain. Be sure to watch for pulmonary engorgement in all these patients. It is best to prop them all up, but if pulmonary edema is increasing be sure to get them up, even into a chair. The specific classes of heart disease that give indication for upright position in failure, to repeat, are hypertensive heart disease, coronary artery failure, aortic valve disease, and mitral stenosis. Old people should never be kept in bed for any cause any longer than is absolutely necessary. They should be put into a chair, especially in pneumonia. At one time, I saw many old people in my work. I spent most of my time getting the sick ones out of bed with most gratifying results.

There probably is a satisfactory cardiac bed but I have never seen one. The ordinary hospital bed with a head that elevates, and a device that elevates the knees so that the patient is in Fowler's position, serves in most cases, however. A better bed would be one with a head that elevates and a foot that lowers, to form a mattress and bedclothes-covered chair. The lack of a perfect cardiac bed makes it necessary for the patient to be made comfortable in a chair in certain cases. Do not hesitate to put a patient in a chair when necessary. You will be rewarded with apparently doomed patients getting better.[8] For patients in the home, a cane bottom chair under the mattress, covered with pillows and pillows under the knees, answers the need in many cases. This method of elevating the head is more satisfactory than by pillows alone.

The main contraindication to the upright position is forward heart failure,[16,17] or circulatory failure, due to inadequate heart output, which occurs in paroxysmal tachycardia, heart block, myocardial disease, diminished blood volume (as in hemorrhage, collapse, and traumatic shock), fainting, secondary shock, orthostatic hypotension,[18,19,20] and after spinal anesthesia. In these cases, it is important to place the patient in the horizontal, and even the head in a low position in order to get blood to the vital centers of the brain.[17] There are other most rare conditions, as orthostatic hypertension[21], that are contraindications to the upright position. Most of these are temporary, rare, or respond well to appropriate treatment.

Conclusion: Prop up most cardiac patients. Get some in a chair. Let those who so desire lean forward.

BIBLIOGRAPHY

1. Levine, S. A., Personal communication
2. Christian, Oxford Monograph on Diagnosis and Treatment Vol. III Oxford University Press, 1940
3. Garven, Chinese Med. J. 57:449, May 1940
4. Weiss Med. Clin. N. A., Sept., 1940
5. Reid, N. E. Med. J., 222:627, April 11, 1940
6. Plotz, Ann. Int. Med., July, 1939
7. Baer, Ann. Int. Med. Med., 13:2246, June, 1940
8. Levine, J.A.M.A. 115:1715, Nov., 16, 1940
9. Mayerson and Toth A.J.P. 125:474, 1939
10. Hitchcock et al, A. J. P., 124:457, Nov. 1, 1938
11. Koole and Allen, Am. Heart Journal, 18:29 Nov., 1938
12. Nielson, Herrington, and Winslow, A. J. P. 127:3, 1939
13. McMichael and McGibbon Clinical Science 4:175, 1939
14. Dow A. J. P., 127:793, Nov. 1, 1939
15. Laplace and Nicholson J. A. M. A. 110;247, 1938
16. Drake, Minn. Med., 23:198 March, 1940
17. Fantus J. A. M.A., 114:2010, May 18, 1940
18. Ellis and Haynes Arch Int. Med., 58:773, 1936
19. Browne and Horton Minn Med. 22:302, 1939
20. McLean, Horton, Moersch, Proc. Staff Meetings Mayo Clin., 14:620, 1939
21. McCann and Romansky J. A. M. A., 115:573, 1940

DISCUSSION

Dr. Sam Brister (Greenwood): Dr. Meek has so thoroughly covered the upright position in heart disease that it leaves little to discuss, but to emphasize its use, and study its effect on the patient so as to get the maximum benefit from this position. If you will allow me to wander I would like to call to your attention again that the trend is to develop a preventive treatment or check on heart disease. We are listening to more hearts, and becoming better acquainted with the heart and the forerunning signs and symptoms of heart disease. Thus we can and are guarding our patients more carefully. The education of the laity as to the value of periodic physical examination will give the physician opportunity to get prospective cardiac cases earlier, and give him a better chance to prevent or limit the amount of damage done. The electrograph is a big stride forward in the early checking and diagnosing of the condition of the heart, not only in the true cardiac but in the suspicious or supposedly well patients. The public is beginning to appreciate the uses and value of the E.K.G. not only as an aid to diagnosis but as to treatment as well. All of us should have a basis to work from in the early detection and handling of these cases. The consideration of the pulse, respiration rate, the systolic and diastolic blood pressure, the pulse pressure should be governed by a complete history and physical examination. Good advice for these patients is rest and care for their health before we have to make them rest, or their condition is such that they are forced to rest.

The Treatment of Urethral and Ureteral Strictures*

OTIS H. BECK, M.D.
GREENVILLE, MISSISSIPPI

A YEAR AGO I witnessed Dr. Sam Broyles at Amarillo, Texas, using electrolysis in the treatment of urethral strictures. The procedure and the results were beyond my imagination. I, therefore, decided to purchase one of the machines.

In this country the unpopularity of electrolysis in the treatment of urethral strictures is probably due to improper technique. Instead of electrolysis, fulguration has been used. If a stricture is fulgurated, the result is disastrous. Instead of being dilated the stricture becomes smaller, or even impassable because of formation of new scar tissue.

Electrolysis is not fulguration. In a sense, it is a chemical process. In physics, a well-known fact of electrolysis is that hydrogen and metals are deposited on the negative electrode while oxygen, residual acids and salts are deposited on the positive electrode.

When electrolysis is applied to the urethral canal the following process is observed: on the negative electrode, sodium (Na) is deposited from the surrounding tissue and in the presence of water forms sodium hydroxide ($NaOH$) and free hydrogen (H). Sodium hydroxide ($NaOH$) constantly forming acts on the surrounding scar tissue, dissolving and absorbing it. The degree of this action depends on the amount of electricity applied through that electrode and on the distance of the tissue from it. Tissue in direct contact with the electrode is more definitely affected than tissue at some distance.

The electrode is introduced into the urethra up to the stricture and the current is then turned on and slowly increased to a 2-5 m.a. Pressing on the electrode, the operator moves it in and out of the stricture in different directions. The treatment lasts from five to twenty minutes. When all strictures have been treated the current is slowly turned off and the electrode is withdrawn. Metal olives may be changed three or four sizes during the same treatment if the stricture responds promptly to dilatation.

The urethra is left alone for one month after treatment. At the expiration of this time if, after exploration with a "bougie-a-boule," strictures are still present, the patient is given a second treatment. Again after one and a half month's rest, there is a re-examination with a bougie. Treatment is given, if needed, followed by another rest of three months.

Good results are obtained after two to five treatments. Upon completion of treatments, the patient is kept under observation and examined every six months during the first year and then at longer intervals.

One month after the first treatment, inflammatory strictures are found to have retained the same caliber obtained by treatment or even may be larger, but rarely smaller. Subsequent treatments will improve the surface of the canal, and the unevenness of the urethral wall usually disappears permanently.

Unfortunately, in traumatic strictures, recurrence is unavoidable. The re-appearance is, however, less rapid after such treatment than by dilatation with the sounds.

The immediate result of electrolysis is striking. The patient passes his urine with a wider stream and with greater ease on the same day or the following one.

By electrolysis one can dilate inflammatory and not too old cicatricial strictures in a comparatively short time and obtain a complete cure.

Ureteral strictures may be organic or functional. The incidence of ureteral stricture causing symptoms is about two per cent. In 1910 Hunner first began the stormy petrel of many a gathering which might otherwise have remained complacent, serene, and perhaps uninteresting. Of late years it has remained rather dormant, and yes, neglected. To arouse us from this apathy and call attention to a definite clinical entity may result in relieving or curing a very troublesome and at times agonizing clinical syndrome. Ureteral stricture as treated, or rather as neglected today, is not only responsible for the physical discomfort and incapacity which it directly causes, but must also be charged with the results of mistaken diagnosis. When such errors lead to multiple abdominal operations, the patient not only suffers psychic or mental burdens because of repeated disappointments at failures to cure, but may go on to develop a permanent, morbid outlook on life. Finally, consider the resultant damage to the kidney itself if we fail to diagnose and correct a ureteral stricture, be it functional or organic. In the face of these most convincing facts, can we doctors in this day of preventive medicine continue to contemplate these mistakes with equanimity?

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*Read before the thirty-eighth semi-annual meeting of the Delta Medical Society, Greenville, Mississippi, October 8, 1941.

The organic form of stricture may be congenital or acquired. The congenital types are usually the result of anomalies in development. By far the greater number of organic ureteral strictures are acquired. Trauma, a severe accident, gunshot or stab wound, injury at operation or childbirth, may all be direct causes. Extrinsic causes as adherent tumors, adhesions, and periureteritis will form organic narrowing of the ureteral lumen. Syphilis or focal infections may also be causative factors. Some congenital cases are due to inflammatory processes set up by the placental circulation. The acute infectious diseases of childbirth probably leave inflammatory areas in the ureter resulting in the appearance of a symptom complex later in life. Any localized acute or chronic process may eventually lead to ureteral stricture which usually occurs bilaterally. Since most organic strictures are found in the broad ligament region from 2 to 5 cm. above the bladder, or in the iliac gland region from 3 to 5 cm. below the pelvic brim, it is quite probable that the systemic infection first attacks the lymph glands in these regions and later invades the neighboring ureteral wall. B. coli are frequently carried to the kidney by the blood stream and possibly by the lymphatics following the removal of the appendix. C. Otis Ritch has called our attention to ureteral occlusion as a causative factor in many cases of essential hypertension. Men complaining of backache, pain in the legs, listlessness, lassitude and fatigue, in addition to being scrutinized for prostatitis and vesiculitis, should at times be tested for ureteral strictures.

Fibrosis, at a given point in the ureter causing immobility and fixation of the muscular coat with consequent dilatation and atony of the musculature above, destroys the natural peristaltic action at the narrowed, fibrotic muscular areas. Pathological change of tissue near the ureter may involve it directly, or indirectly, through a disturbance of the vascular supply, lymph drainage, or autonomic nervous system.

The symptoms of ureteral stricture are many and varied. Since this is usually a chronic and previously overlooked condition, we are not infrequently confronted with a patient whom many physicians have classified as a "neuro." Trixier and Clavel have referred to these vague and varied symptoms as the "retroperitoneal syndrome," citing from experimental work that the reflexes arising from a kidney and ureter, which are the site of increased pressure, may be classified as: (1) renogastric reflexes affecting the stomach both as to motility and secretory activity, sometimes being excitatory and sometimes inhibitory in character; (2) reno-intestinal reflexes, the colon being particularly sensitive to these stimuli which may be either motor or inhibitory; (3) peritonism of renal origin, a condition closely resembling peritonitis without the fever.

Pain is the most frequent symptom of ureteral stricture and in about one half the cases is usually referred to some part of the urinary or genital tract. Frequency of urination, pain on urination, urgency, incontinence of urine when coughing, sneezing, or straining, and pain in the region of the kidneys are the usual complaints referable to the urinary organs. Cystitis is frequently associated with strictures. The most usual site of the pain is in the pelvis somewhat lateral to the midline. It has frequently been mistaken for an appendiceal or ovarian pain. This pain may be sharp or dull, continuous or intermittent, increased on standing or sitting, again illustrating the great variable and confusing clinical picture exhibited. Many women complain of a dysmenorrhea, but a searching history will reveal that the pain during the menstrual period is merely an aggravation of the pain present during the month. Referred pain may occur in the hip joint, sacro-iliac joint, along the course of the sciatic nerve, near the anterior spine, in the region of McBurney's point and down the inner and anterior aspect of the thigh as far as the knee. Symptoms, other than dysmenorrhea, due to ureteral stricture vary in intensity, dependent upon the general state of health of the individual. Worry, overwork, alcoholic excesses, dietary indiscretions, acute coryzal attacks, tonsillitis, extraction of abscessed teeth, removal of acute or chronic focal infections all tend to exacerbate a latent or quiescent condition making it very painful and acute. Headaches are a frequent complaint. Few features of this work have been more spectacular than the complete relief obtained in some cases of invalidism in which headaches of the migraine type have been a predominant symptom.

The older methods of treating ureteral stricture consisted of frequently repeated dilatations together with the eradication of urinary tract infection and removal of all discoverable foci of infection. To the above I wish to add the correction of any apparent endocrine unbalance and, finally, the use of negative galvanism so as to avoid the too frequent traumatic dilatations necessary when employing the older methods. Brutal, forceful stretching of a strictured area by tearing the way through a too energetic and powerful thrust of a hard, stiff ureteral catheter frequently defeats its own purpose. It induces a defensive tissue reaction and the formation of more fibrous tissue than was present prior to dilatation especially in the organic type and in the presence of a B. coli bacilluria. B. coli are definitely fibrous agitators and their presence causes an excessive amount of fibroblastic activity. In the functional or spastic type of stricture, over-stretching and trauma no doubt induce a temporary paralyzing effect on the intrinsic autonomic nerves of the ureter because of local edema. Eventually this has a derogatory effect on these nerves and, upon subsidence of the edema, there ensues a consequent over-stimulation of the opposing autonomic nerve forces with a resultant return of the spastic narrowed ureteral area to its former malfunctioning state very much more quickly than would be the case when dealing with true organic structure. This type of stricture is only very temporarily improved. In fact no apparent improvement is frequently noted, so transitory is its effects. At least, this has been my experience.

By the use of the galvadilator these strictures are softened and with the general amount of liquefaction that takes place gives one better results.

Let me stress the importance of not trying to burn the tissue but liquefy it. The advantages of this process are many. The ease and simplicity of its manipulation should interest every one.

Case: White, age 45, came in complaining of being unable to void and pain in the lower abdomen. A stricture was found at the beginning of the membranous urethra. A filiform was finally passed and then the bulb of the galvadilator was put in place. After eleven minutes the bulb passed the stricture. There was no pain and the patient got up and voided. Subsequent trips revealed a normal urinary flow. Sixteen cases have been treated and all have recovered and are very happy over the results.

Not in the glamor of the crowded street,
not in shouts and plaudits of the throng, but
in ourselves are triumph and defeat.
—Longfellow.

Amebiasis*

R. F. SPAULDING, M.D.
ARCOLA, MISS.

BY THE TERM amebiasis is meant the invasion of the tissues of the body of man by the protozoan organisms known as Endamoeba histolytica and includes all the clinical pictures caused by such invasions. Thus it embraces all the signs and symptoms present in mild infections in which vague gastro-intestinal symptomatology is present: those present in infections accompanied by severe enteritis or amebic enteritis; those present in acute dysentery or amebic dysentery; and those present in abscess of the liver, brain or other organs, or caused by invasion of the skin. In most of our textbooks, even those of recent date, amebiasis is considered under the general title of amebic dysentery, but this is entirely incorrect, as amebic dysentery is simply part of the clinical picture of infection with this organism, or amebiasis. Amebic dysentery is not a disease entity, but is merely one stage in the development of amebic infection and to consider the entire subject of amebiasis under this heading would be like considering the entire subject of malaria under the title "pernicious malarial fever."

It is also most important that the physician realize that only a small proportion of the individuals suffering from amebiasis ever develop amebic dysentery and that the term "tropical", as connected with this type of dysentery, is erroneous, as many cases of amebic dysentery occur in temperate and cold climates. In fact, the first case of amebic dysentery was described by Losch in St. Petersburg, Russia, in 1875.

The geographic distribution of Endamoeba histolytica is world wide. While this is true, it is also true that it occurs much more frequently in the subtropics and tropics, probably not because of climatic conditions so much as because sanitary conditions in such regions are usually far below those of temperate regions.

Amebic dysentery and amebic abscess of the liver are observed most frequently in Louisiana, Alabama, Georgia, Florida and Texas, but numerous cases have been reported from California, the Carolinas, Tennessee and Virginia.

The cause of amebiasis is an ameba, Endamoeba histolytica, an animal organism consisting of a single cell, and hence belonging to the Protozoa.

Endamoeba histolytica is the only pathogenic ameba so far differentiated in man, and it lies in the lumen and tissues of the intestinal tract, preferably in the large intestine, but not infrequently in the lower portion of the ileum and in the appendix.

Endamoeba histolytica occurs in the intestine in two forms, the motile or trophozoite form and the immotile or cystic form. The motile forms are found in fluid or semi-fluid stools, while cysts are found in solid or semisolid stools, although rarely motile forms may be found in formed stools in mucus which has been scraped off an ulcer during the passage of the stool through the intestine. The cysts are the infective stage of the parasite, being swallowed by man in food or drink contaminated by feces containing them, but infection may occur through swallowing the motile forms if such forms should reach material ingested by man. The motile forms are not killed by the acidity of the gastric juice.

The cyst which is swallowed, after reaching the lower portion of the ileum and the upper portion of the large intestine, liberates a motile ameba which eventually divides into eight young amebae, according to Dobell and others, or into four young amebae, according to Swartzwelder and others. The young amebae, resulting from the division of the excysted ameba, invade the tissues of the intestine and divide by simple fission into two amebae, forming nests of the parasites from which foci the amebae penetrate farther into the intestinal coats.

The amebae which remain in the lumen of the bowel and which do not succeed in penetrating the tissues, may multiply for a limited period of time, but conditions for their multiplication soon become unfavorable and they then round up, lose their motility and become the precystic forms which eventually secrete a cyst wall and become cysts. The latter are passed from the bowels with the stools and are swallowed in food or drink contaminated with feces containing the cysts.

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*Read before the thirty-seventh semi-annual medical meeting of the Delta Medical Society, April 9, 1941.

The transmission of Endamoeba histolytica from man to man depends upon the ingestion of food or drink contaminated with the cysts of this parasite. These cysts are quite resistant to various chemicals. Chlorination of water as applied to public water supplies has no effect upon the cysts. Filtration through sand filter beds used in public water supplies removes the cysts from the water and thus filter water is safe. The cysts will withstand a 1:2500 solution of bichloride of mercury for thirty minutes; a one per cent solution of carbolic acid for thirty minutes, and a two per cent solution of potassium permanganate for three days.

Flies are intimately concerned in the transmission of amebiasis, and the cysts may remain alive in the intestine of the fly for twenty-four hours. Cockroaches may also transmit amebiasis. The usual methods of the transmission of amebiasis are through the ingestion of the cysts of Endamoeba histolytica in contaminated water; by food being contaminated while being handled by carriers of the ameba; by the use of human excrement for fertilization purposes; or through the droppings of flies and probably cockroaches that have fed upon the material containing the cysts.

The incidence of infection with Endamoeba histolytica varies greatly in different localities. A survey of practically all portions of the United States revealed that of 67,911 individuals examined, 6.869 were found to be infected with this ameba, or 10.1 per cent. In certain regions in Tennessee, thirty per cent of the individuals examined were infected, and in the Mississippi Delta it has been estimated that sixty per cent of the individuals examined were infected.

The epidemic occurrence of amebiasis is possible if conditions are favorable to the transmission of the infection, as was demonstrated by the epidemic originating in Chicago in 1933, during which more than a thousand cases of amebic dysentery with more than sixty deaths were reported within a period of three months. This was due to the contamination of the stored water supply of a certain hotel which had become contaminated with sewage through cross connections in the plumbing between the sewer and the water supply pipes of the hotel.

The general factors influencing the incidence of amebiasis are climate, race, sex, food, and occupation.

Climate has a profound influence upon the incidence and severity of amebiasis. Amebic dysentery and amebic abscess of the liver are much more frequently observed in the tropics and subtropics than in temperate regions, probably in part due to poor sanitation in such regions which favor infections and probably because a hot climate reduces the resistance of the infected individual.

Race is of importance only in that native races living in insanitary surroundings apparently develop some immunity to the parasites and perhaps to actual infection, although the latter has not been proved.

Sex is of some importance in the epidemiology of amebiasis and it is generally stated that infections are less common in the females than in the males. This is probably explained, however, by differences as regards chances of exposure to infection.

Food supply is of importance in that an improper or insufficient food supply favors infection because of reducing the normal resistance of an individual to the infection.

The pathology of amebiasis varies greatly in different individuals and the lesions are due to the cytolysis of the tissues and, in most instances, to the action of bacteria that may be present. The lesions in amebiasis vary with the extent and virulence of the infection and may be microscopic in size and involve only the superficial layer of the mucus membrane in the mildest infections, while in the most severe infections there may be large ulcers penetrating to the muscular or even to the peritoneal coat of the intestine. I am simply going to mention the pathological conditions found. These may be divided into intestinal lesions, which are appendicitis, perforation with resulting peritonitis, amebic granuloma, cicatricial stenoses, pseudo-polyposis; and into extra-intestinal lesions, which are hepatic abscess, pleuropulmonary affections, cerebral abscess, cutaneous ulceration and abscess, splenic abscess, and genitourinary abscess.

They symptomatology of amebiasis as

would be inferred from a study of the pathology of this infection varies all the way from slight, indefinite intestinal irritation to the severe symptoms of fulminant amebic dysentery of those which characterize amebic abscess of the liver or other organs. There are no pathognomonic symptoms of intestinal amebiasis, and the diagnosis must rest on the demonstration of the parasite. The period of incubation of amebiasis varies greatly. It is usually ten days to three months after infection before symptoms appear. There are no symptoms as a rule noted in the so-called healthy carrier or cyst passer, if there is any such thing. In at least fifty per cent of infections within Endamoeba histolytica the infected individuals present mild symptoms connected with the intestinal tract and the nervous system. The symptoms most commonly observed which are connected with the intestinal tract are constipation, abdominal distention and colic and a capricious appetite, nausea, and anorexia, while those connected with the nervous system are headache, insomnia, mental sluggishness and mental depression. Some patients note an irregular action of the heart. and easily accelerated pulse and flushing, attended by sweating palms of hands and soles of feet. Constipation is a very common symptom and may alternate with short periods of diarrhea, but more commonly the constipation is of a chronic type. Abdominal distention and colic are frequent symptoms, the distention usually becoming noticeable shortly after eating, and the patient complains of an uncomfortable feeling of fullness in the gastric region followed by general distention of the abdomen and the passage of considerable gas. Belching is commonly present, and more or less abdominal colic may also occur although there may be no pain in the abdomen in these mild infections. As a rule, however, pain in the abdomen is present, and may be acute. Many of these patients have an invasion of the appendix by the ameba and the symptoms are those of a subacute or chronic appendicitis.

A type of pain that is very common in mild intestinal amebiasis is a dull aching feeling in either the right iliac region or low down on the left side of the abdomen. Frequently this type of pain is almost constant and is most annoying to the patient.

A capricious appetite is a common symptom in mild infections and periods occur in which appetite is poor, while other periods occur in which the patient has a voracious appetite.

Among the symptoms connected with the nervous system, headache is the most common, and consists of a dull boring headache most frequently located over the eyes or upper frontal portion of the head and noted upon awakening in the morning, tending to disappear towards evening. Many individuals complain of a poor memory, and nervous irritability is a prominent symptom. Muscle ache is also a common symptom. In fact, all of the nervous symptoms in amebiasis are those common to a low grade toxemia.

In the mild cases of amebic infections, loss of weight is common. In the more severe infections, the patient often suffers from repeated attacks of diarrhea which may be severe in character and last for several weeks. Diarrhea may be accompanied by colicky pains in the abdomen and the number of stools may vary from three to ten or more. The feces is semi-fluid or fluid in consistency and contains much bile and usually mucus. Microscopic blood corpuscles and motile amebae are often present. The diarrhea may be followed by a period of constipation. If untreated, many of the patients will eventually develop a typical picture of amebic dysentery.

The onset of amebic dysentery may be initiated by a chill and temperature to 102° or higher. The number of bowel movements averages six or eight a day and maybe more. Tenesmus and abdominal pain are usually present. The stool consists mostly of mucus and blood and has a peculiar musty albuminous odor. In the usual case there is little prostration for several days and except in the very fulminant infections, prostration and emaciation are not marked. The duration of an attack of amebic dysentery varies greatly. In the mildest cases the usual duration of the dysenteric symptoms does not exceed a week; more severe attacks may last for several weeks and in the fulminant cases, death may occur within a few days.

The complications which are most common are amebic abscess of the liver, amebic abscess of the lung, amebic abscess of the brain and amebic appendicitis. Abscess of the liver is the most frequent and most important of the complications and is the only one which I shall discuss. It occurs in one to five per cent of the cases, is more common in males than in females and seventy per cent of the cases occur between the ages of twenty-one and forty. It may occur in individuals who have never suffered from recognizable symptoms of amebiasis although it is more common in those who have suffered from repeated attacks of dysentery. The symptoms of amebic abscess of the liver vary much and sometimes are so slight that the patient does not consult a physician until the abscess is of considerable size. The onset may be acute, but usually it is gradual, the first symptoms noted being pain and tenderness over the liver area. The pain is generally dull aching or boring in type, and is usually accompanied by fever. The temperature varies from 100° to 103° and may be septic in type. The leukocyte count varies from 18,000 to 50,000. The facial appearance is usually very suggestive; the skin is sallow and usually there is a slight jaundice and apathetic expression; headache and prostration may be extreme; nausea, vomiting and anorexia are common.

The diagnosis is often made at the autopsy table. The occurrence, however, of a daily rise of temperature, a leukocytosis and tenderness in the liver area in any individual showing Endamoeba histolytica in the stools indicates an amebic hepatitis and probably beginning abscess formation, while an increase in the temperature accompanied by chills and sweating, an increase in the number of leukocytes, and definite pain in the liver area are almost conclusive of the presence of a liver abscess in such patients. X-ray is of importance in the diagnosis of amebic abscess.

The most common drugs in the treatment of amebiasis are emetine, chiniofon, vioform, carbarsone, and diodoquin. Emetine in safe amounts fails to cure more than half the cases. It is cumulatively toxic and it has no effect on the cysts. Its therapeutic range is limited as it cures very few infections. It should be used only to control symptoms of diarrhea and dysentery and in the treatment of amebic hepatitis and amebic abscess of the liver and lung. Emetine hydrochloride is given by subcutaneous injections not to exceed one grain per day for not over twenty days. Chiniofon has a very low toxicity and is also known by the name yaterin. It my produce considerable diarrhea when given in full dosage. It is administered by mouth in the form of tablets or pills containing four grains and the dose is three pills three times a day for an adult weighing a hundred and fifty pounds; this dosage is continued for eight to ten days. It may be repeated after ten days or two weeks, and then stool examinations should be made at monthly intervals thereafter. It is considered a very effective drug, but fails to cure in about twenty-five per cent when used alone.

Vioform is useful in the treatment of carriers and is administered in capsules containing four grains. One capsule is administered three times a day for ten days, an interval of ten days allowed to elapse without treatment and then the same dose repeated for another ten days. It fails to cure usually when used alone.

Carbarsone is widely used and is an excellent amebicide in early uncomplicated amebiasis. It is not very toxic and relieves the usual symptoms promptly and effectively. Relapses occur in about twenty-five per cent of the cases. It is best alternated with diodoquin or chiniofon. It is administered in capsules containing four grains, the dose being one capsule twice a day for ten days, rest ten days, and then may be repeated.

Diodoquin is a very valuable drug in the treatment of amebiasis. The dosage is from two to three tablets of 3.2 grains each, three times a day for ten to twenty days.

Retention enemas of chiniofon may be used. They should be preceded by a cleansing saline enema of about a quart, breakfast being omitted. One hour after the cleansing enema, two to six grains of chiniofon in 200 cc. of water is given as a retention enema daily for one to two weeks. In the mild infections, the patient may remain ambulatory, but those with severe symptoms should be confined to bed, be given a liquid diet during the acute stages, and care should be taken during convalescence to avoid foods that are irritating to the intestines. After the symptoms are controlled, high vitamin diet, vitamins given parenterally, iron and arsenic are useful.

Treatment of amebic hepatitis consists in the subcutaneous injection of one grain of emetine hydrochloride daily for a period not to exceed twelve days.

The treatment of amebic abscess of the liver is largely surgical, but it is important in every case to give a course of emetine as outlined above.

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It seems now that Governor Johnson will not push the central hospital for the state. May be it is not wise, but we see many reasons why we should have the central hospital even under present conditions. One million dollars would be sufficient for the building. Jackson and Hinds County would need to use this hospital for all of their indigent patients. They should, of course, contribute liberally to the construction of the building. With a central hospital with which to affiliate our smaller ones we might have a system that could offer the very finest internship to be found in the world. Six months of the two years might be given in the smaller hospitals of the state and the interns during this part of the training might be required to go out with the practitioners on their calls. This plan would render a mutual benefit. Undirected internships in the large hospitals are falling far short of the mark.

Health reserves must be built into the people wherever they are found. Since the United States must now assume the medical leadership of the world, more medical schools and more internships will be needed. We should lay aside all selfishness and begin an all-out move for a real medical brotherhood and for an increased health reserve. If we are not to have a central hospital, then we should have a system that applies to one and all on an equal basis with a per capita fund distribution. We should have the vision and the courage to go forward.

The Central Medical Society made a fine gesture at its monthly meeting in January by honoring Dr. Harvey F. Garrison, Sr. president-elect of the Southern Medical Association. The local society turned out with a big attendance, plus a number of doctors from over the state. Mr. C. P. Loranz, of Birmingham, secretary-manager of the S.M.A., was present. Dr. W. W. Crawford, of Hattiesburg, and Dr. Felix J. Underwood, both past-presidents, made splendid speeches on the occasion. Dr. Seale Harris, of Birmingham, also a past-president, was the guest speaker. Dr. Harris is the embodiment of Southern medicine. He is a great doctor and a one of the nation's finest Christian citizens. The medical fellowship at the meeting was superb, and it was fine to be there. Dr. Garrison is worthy and well-qualified to make one of the outstanding presidents of the Southern Medical. We feel very sure he will achieve the rank. His organization of state presidents, secretaries and editors, meeting each year, was a constructive move. It is growing in popularity and has already served a fine purpose. It is helping to make the medical fraternity of the nation stronger within. Dr. Garrison has done much for pediatrics in Mississippi and he has served organized medicine well.

The Southern Medical Association at its last session gave quite a bit of thought to making the programs more practical and more helpful to the practitioner. This was certainly a step in the right direction. Every medical society in the country should think along this line. The time is certainly propitious for the Mid-South to give due consideration to the practical program. Essayists should also be urged to prepare their papers for publication. The paper may be heard by three or four hundred when presented, but will probably be read by three or four thousand in the journal. The Mid-South should strive to serve the practitioners of this territory as well as the specialist. The challenge to the medical profession is the building of total health reserves.

Drs. J. P. Culpepper, of Hattiesburg, and E. S. Fields, of Centerville, are the new members added to the State Board of Health. We congratulate the medical society and the governor on their fine selections. The men are worthy and well-qualified in every way for this responsible position of honor.

To each and every one of our readers and advertisers we wish a very happy year. We deeply appreciate your help in every way. Let this journal serve you if possible in any way.

You will note the list of exhibitors for the Mississippi State Medical Meeting in May. We appreciate every one of them. Dr. Jones is doing good work on the committee.

Thanks to Dr. Phil B. Bleecker, 1st Lt. M.C. 41st Engineers, Fort Bragg, N. C., for renewal to the journal. He was well known in Memphis before entering the army.

Thanks to Dr. S. T. Miller, of Yantley, Ala., for renewal. We are glad to have him as a reader of the journal.

WORKMEN'S COMPENSATION LAW

A written indorsement by Dr. Augustus Street of Vicksburg, president of the Mississippi Medical Association, of a proposed workmen's compensation law at the approaching legislative session, was made public recently by J. K. Morrison, one of the sponsors of the proposal.

Mr. Morrison said the plan has also been indorsed by Dr. W. H. Anderson of Booneville, editor of the *Mississippi Doctor*, and Dr. John Culley, Oxford, president of the Mississippi Hospital Association.

Directing his statement of indorsement "to the doctors of Mississippi," Dr. Street appealed to the medical profession to use its influence toward passage of a "just workmen's compensation law," and one that will be a "humane measure and a benefit to all the people of our state."

"Under the present system hundreds of cases are tried in our courts," Dr. Street said. "The courts are blocked, the time of court officials, of witnesses, and of juries is wasted with little benefit and with useless expense, both to the employer, employee and his family.

"A Department of Labor expert, present at one of our recent meetings, stated that the lack of workmen's compensation act in Mississippi was actually preventing location of some government plants in this state.

"We want a good law which is fair to all. We want a good law, and as badly as it is needed, we would rather have no law than a poor law."

Dr. Street appealed to the doctors to contact members of the Legislature in person, "if possible," soliciting their support of the proposal.

EDITOR'S COMMENT: The above appeared in the Commercial Appeal of recent date. This state should certainly have a workmen's compensation law, in our opinion. It is the only state in the Union that does not have one. We need more factories to take up our slack labor and to give us a cash payroll each week. The lack of a workmen's compensation law is holding us back. We should go forward. There should be no further delay on this important legislation.

Remember Pearl Harbor! What a slogan to begin the new year! Not only for the new year but for a new era. With the fall of Pearl Harbor, I am thinking, old things passed away and all things, economic and political, became new. Since the beginning of Hitler's drive for world domination I have felt that, regardless of his success or failure, a new world order is inevitable. For many years I have felt that a change is inevitable and imperative. Rugged individualism and the capitalistic system have been due for collapse for a long time. Coming events always cast shadows before them, and these have been apparent to seeing eyes for decades past. William Jennings Bryan was a voice crying in the wilderness as truly as was the Baptist. But as were the Jews and the world, deaf to his proclamation, so is our generation. At the beginning of Mr. Bryan's last campaign, he said with emphasis that unless laws were enacted to *regulate* business our economic system would be doomed. During the first great war, billions of dollars and many thousands of American lives were spent in a vain effort to bolster and perpetuate a system that was tottering. American youths were conscripted and sacrificed while American millionaries were amassing more millions and speculators and racketeers were becoming millionaires. One great Mississippian deplored the mistake that was being made and urged that money be drafted as well as men. For this he was crucified by hired propagandists. Things went worse than this prophet had foretold, and soon blear-eyed starvation confronted the great majority of American citizens and revolution with all its horrors seemed imminent. Out of the uncertainty and terror that had settled upon a once happy people the voice of a great leader was heard. This voice, though that of an invalid, promised a new deal and gave a pledge that no American should starve or freeze. No human in all history was ever so maligned and browbeaten. But he never wavered nor manifested fear or doubt. All the millionaires with all of their ill-gained wealth were pitted against him. But the faith of freeborn Americans remained steadfast in their champion. Despite hallowed precedent and the charge then that he was seeking to rush us into war, he was chosen for our leader once again. His warnings and pleadings to prepare were scoffed at by the politicians. If there had been but one Lindbergh little harm might have come. But there were little Lindberghs in every city, town and hamlet. Of course they said it could not happen here. But it did happen and Pearl Harbor fell —the American flag was lowered in disgrace. Where are the Lindberghs now? Many of them are very loyal now. They are perfectly willing to accept commissions and to serve the nation. Even our great army of millionaires are in the fight now. The wealth of the nation as well as all the people is enlisted for the duration, and may it please Providence that victory over all aggressors may be won. I am not, never was and never will be a communist, and I am amused to see some people warming up to and praising the Russians. I, too, am in favor of giving Satan his due, but I shall not forget Kipling's warning to "beware of the bear that walks like a man." Let us forget our past differences and remember that we are, indeed, engaged in an "all-out war." We must meet Hitler and destroy Hitlerism. We must realize that there is a "yellow peril" as declared by Richmond P. Hobson many years ago. Our flag has been insulted, our men are fighting and dying in the Pacific. If honor is to be preserved and if victory is to be achieved, we who are at home must fight and suffer too. Upon the doctors a heavy burden but a plain duty is settling. Our soldiers must and will be cared for, and the millions behind the rifle range must be cared for too. I do not know and can not see how this is to be done, but done it will be. The spectre of state medicine has haunted us for a number of years and it may well be that this crisis may result in this very thing. Who can tell? We older men of medicine have labored hard to keep the escutcheon of our profession clean. We have fought commercialism and have tried to make the relief of human misery our chief aim. I for one am proud of our record, but it pains me to know that the dwellers in remote rural districts may soon be denied the comfort of knowing that he who administered to them in sickness was their friend whom they could trust and love. When the day comes, when the doctor works for pay alone, it will be sad indeed. And if it shall be necessary, even then, to cart the sick away from home and loved ones to some hospital in order to obtain medical care, we must accept this as a part of the "new order" that seems destined for the world. It is reported that a recent drunk said, "History does, indeed, repeat itself. The same year in which Columbus discovered America has come again." When told that the discovery was in 1492 while this is 1942, the drunk said, "No diffuce—figures just the same." I wonder if things will go on "just the same?"

G. S. B.

News and Comments

Dr. W. W. Crawford, of Hattiesburg, the senior Mississippi past-president of the Southern Medical Association, a charter member and fourth president, has never missed a meeting. A fine record for Doctor Crawford in the Southern is equaled by a record as good in practice and in organized medicine.

COMMERCIAL EXHIBITORS

MISSISSIPPI STATE MEDICAL ASSOCIATION

Jackson, Miss., May 12, 13, 14, 1942

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Kay Surgical, Memphis, Tenn.
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Lederle Laboratories, New Orleans.
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John Wyeth and Brother, Philadelphia.
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Van Pelt and Brown, Richmond, Va.

RETIRES AFTER PRACTICING FOR 55 YEARS

DR. LEWIS CARTER JONES

Dr. L. C. Jones, beloved practitioner of medicine in and about the town of Madison County, for the past fifty-four years, has retired from his busy practice and loving ministration to the thousands of citizens who came and went throughout the years of this long period of service.

"The greatest sorrow in my life was to leave these people," said Dr. Jones. "They have no doctor now and apparently are unable to get another physician." It may be stated, too, that the people around Madison were also in great sorrow when it became necessary for Doctor Jones to retire, because all felt a great confidence in his capacity to minister to them in the presence of disease.

Doctor Jones has not retired because of age or dimming intellect. Apparently he is just as active as ever. But a physical handicap set in a few years ago, which has progressively grown worse, and it was necessary that he retire for this cause alone.

Dr. Lewis Carter Jones was born on June 9, 1861, at Phoenix, Yazoo County, Mississippi. He is a son of Dr. Lewis H. Jones, who practiced for forty-seven years at Phoenix and Brownsville, Mississippi, and who was a graduate of the medical school of the University of Pennsylvania in 1854.

Doctor Jones graduated from the Louisville Medical School on February 26, 1886, then moved to Phoenix and practiced with his father for one year before settling for his long period of residence at Madison. On December 26, 1886, he was married to Miss Roberta Holloman. Mrs. Jones died of yellow fever in the epidemic of 1898, during which time Doctor Jones was also a victim of the disease.

In all of the fifty-five years of practice, night and day, on horseback, in a buggy and in automobile, Doctor Jones lost approximately one month because of personal sickness. He even practiced while affected with typhoid fever of the "walking" type. He states that he kept four or five horses ready and went one hundred miles many a day on horseback. He never refused a call, except to those who refused to pay when able to do so.

During his long life of practicing medicine Doctor Jones brought into the world a total of 3,550 new citizens of Mississippi. Some of these now have great-grand-children. Also, during these fifty-four years in Madison five brother physicians died in the town, and six others came and moved away, none of them remaining longer than four months.

Although Doctor Jones was never a specialist and his office was not supplied with x-ray or other expensive laboratory accessories, he seemed to possess a "sixth sense" for diagnosis of obscure complaints, often astounding his more favorably equipped brethren with the accuracy he displayed in arriving at his conclusions.

Doctor Jones' second wife was Miss Alice Taylor, who is still living. Six children remain, as follows: L. Barrett Jones, attorney, Jackson, Mississippi; Bert H. Jones, attorney, McComb; Robert W. Jones, Methodist minister, Memphis, Tennessee; Mrs. Priestley Jones Doeane, Seneca Falls, New York; Mrs. Inez Bradford Jones, Dr. Lewis Carter Jones, New Orleans, Louisiana; and Miss Florence Jones, Madison, Mississippi.

Doctor Jones is a Methodist, a Mason and a Sigma Chi.

CLAY COUNTY HEALTH UNIT

The personnel of the full-time Clay County Health Unit at West Point, has been announced with Dr. George E. Riley, director; D. E. Edwards, of Jackson, sanitation supervisor; Miss Inez Driskell, of Jackson, public health nurse and Mrs. Edwin Grantham, of West Point, clerk.

ANNOUNCEMENT

Dr. James A. Price announces the opening of his office in the Physicians and Surgeons Building, 899 Madison Avenue, Memphis, Tennessee for the practice of medicine, specializing in disease of the chest.

COMING MEDICAL MEETINGS

Mid-South Postgraduate Medical Assembly, Memphis, Feb. 10, 11, 12, 13, 1942.

The Southeastern Surgical Congress will hold its annual session in Atlanta on March 9-11, 1942. Dr. Irvin Abell, of Louisville, Ky., is president.

American Congress of Obstetrics and Gynecology—April 6-10, 1942, St. Louis, Mo.

American College of Physicians, St. Paul, April 20-24, 1942.

Mississippi State Medical Association—Jackson, Miss. May 12, 13, 14.

American Medical Association, Atlanta City, June 8-12, 1942.

BIBLIOGRAPHY OF PHARMACOLOGY AND CHEMOTHERAPY

Beginning with Volume 3 (1942) the name of the *Bibliography of Pharmacology* is changed to *Bibliography of Pharmacology and Chemotherapy.* No change in scope is contemplated; "Chemotherapy" is added only to make the title more accurately descriptive. The *Bibliography's* field is defined thus:

"A reference list of current American and foreign literature relating to the action of known chemical compounds (natural or synthetic) on animal organisms and to therapeutic use of such compounds, including clinical investigations but not including routine clinical and case reports."

Format will be modified by heading each entry with a blank line for insertion of the subscriber's own index heading, as an aid to those who mount clipped *Bibliography* items on index cards. Below this line each entry will begin with an optional index heading (in capitals) selected by the compiler.

The annual subscription rate is $3.50, or $2.50 to members of the *Friends of the Hooker Scientific* Library. Requests for more information or for a specimen page may be addressed to the Hooker Scientific Library, Central College, Fayette, Missouri.

HARVEY FRANKLIN GARRISON

PRESIDENT-ELECT OF THE SOUTHERN MEDICAL ASSOCIATION

The extending world battle ground and the entry of the United States into its fast-moving center, will bring new responsibilities to the leader of the Southern Medical Association. Organized medicine will play a tremendous role in the winning of the war, and the Southern Medical war president, 1941-1942, Dr. M. Pinson Neal, will have new responsibilities. For the second year, 1942-1943, which may be harder than the first, the president-elect, Dr. Harvey F. Garrison, will have time to study and prepare for his labors.

Dr. Harvey Franklin Garrison, of Jackson, Mississippi, was born in 1879 in Maysville, Georgia. His father was John E. Garrison and his mother Narcissis Scott, both natives of Georgia. His father owned and operated lumber mills.

Dr. Garrison was educated in the schools of Mississippi and at the University of Tennessee. He received his M.D. from the University of Tennessee College of Medicine. After his graduation he entered upon a general practice in south Mississippi as the partner of a well known physician, Dr. J. J. Bethea, of Hattiesburg. He joined the Southern Medical Association in 1911.

Dr. Garrison married Miss Elizabeth Bethea, of Newhebron, Mississippi, a member of a family of physicians. Mrs. Garrison is the niece, sister, wife and mother of members of the medical profession. She has constantly aided Dr. Garrison in his undertakings, and for the past twenty years has accompanied him to practically all medical meetings and especially to the Southern Medical Association, and she is active in medical auxiliary work. They have two sons, Dr. Harvey F. Garrison, Jr., who is associated with his father in the practice of pediatrics in Jackson, Mississippi, and Wickliffe Tucker Garrison, an adopted son, who is with the Lockheed Aircraft Industry, in Los Angeles, California.

Since he has been in practice Dr. Garrison has continuously reinforced his medical knowledge. He did postgraduate work at the New York Postgraduate Medical School. He was a student of the lamented L. Emmett Holt, the greatest pediatrician of his time.

During World War I Dr. Garrison was rejected for active military service on account of a physical disability, but volunteered for any service. While on the Mexican border, recovering from illness due to overwork, he was asked by the Surgeon-General of the Army to assume the responsibility of physician to a student-army training corps at Mississippi College, Clinton, Mississippi, where he reported for immediate duty and served for the duration of the war. After his discharge from the student-army training corps, the college trustees elected him college physician. He resigned this post to resume his specialty of pediatrics. He then went to Columbia University, New York, for a postgraduate degree.

In 1922, he moved to Jackson, Mississippi, where he built a large practice and has become a leader in the specialty of pediatrics. He has made valuable contributions to pediatric thought. He is staff pediatrician for the Mississippi Baptist Hospital, the State Charity Hospital, the State Tuberculosis Sanatorium, the State Hospital for the Insane, and the Wally Hospital.

Organized medicine has always interested him; he has served in every position of honor in his local and state medical associations. In his State Medical Association he was chairman of the Council for ten years; and he has been a member of the State Board of Health and State Board of Medical Examiners for eight years; was president of the State Medical Association and president of the State Pediatric Society; and a member of the Council of the Southern Medical Association for the constitutional limit of five years. He is a member and state chairman of the American Academy of Pediatrics for Mississippi; a licentiate of the American Board of Pediatrics, and in 1940 was chairman of the Section of Pediatrics of the Southern Medical Association. He has served as a delegate to the American Medical Association for many years.

In 1915 Dr. Garrison introduced a resolution in the House of Delegates of his State Medical Association requesting the State Legislature to build and equip a sanatorium for the treatment of tuberculosis. Later he served as secretary of the special committee of the State Board of Health that directed the building and that governed the institution for eight years.

Dr. Garrison is a member and deacon of the First Baptist Church of Jackson. He is a Thirty-Second Degree Mason, a member of the Shrine, and a member of the Kiwanis Club.

He has many calls upon his time by his connections with organizied medicine, by his church, lodges and civic organizations. These have not interfered with his duties as a skilled clinician or prevented his maintaining a familiarity with the ever-increasing pediatric literature.

HARVEY F. GARRISON, SR.*

President-Elect
Southern Medical Association
1941-1942

FELIX J. UNDERWOOD, M.D.
JACKSON, MISS.

Of all the men who have figured in the medical, political and social life of Mississippi, no one in my judgment has been more versatile than the president-elect of the Southern Medical Association.

Possessing remarkable ability and unusual energy, he has been able to adorn and dignify every position of honor and trust bestowed upon him by organized medicine, the church, and the state, in a way that has pleased all of us.

After Dan Williams got the cockleburs out of his hair down in Covington County and gave him friendly encouragement and assistance, such as only an interested friend and fellow practitioner knows how to give at the psychological moment, his advancement has been steady and sure.

I first knew him as a member of the State Board of Health, working with his usual energy and effectiveness in the creation and location of the Mississippi State Tuberculosis Sanatorium. He was on the committee to locate this institution that has so well served the people and the medical profession of Mississippi.

I served with him for ten years as a member of the Council of the Mississippi State Medical Association. He succeeded me as chairman of that august body when I retired to become president of the State Medical Association in 1919. He served the Association for a number of years as chairman of the Council and rendered valuable service to the profession both on and off the Council.

The Mississippi State Medical Association chose him as president for the year 1936-37, and he was one of the hardest working presidents in the entire history of the Association. His presidential address at the 1937 meeting entitled "The Child—the Responsibility and Privilege of the Physician, State and Nation," was outstanding and attracted much deserved attention.

As Councilor for Mississippi for five years, he ably represented the profession of the state in the Southern Medical Association. He was a hard worker there and made many friends for Mississippi and himself by his ability and foresight. He advocated a number of progressive and useful measures adopted by the Association.

Much and varied though his valuable services have been, perhaps none has had wider appeal than his annual meeting of the leaders of the medical profession, particularly of the South, to interchange timely views and opinions and to develop constructive medical thinking. It started at the 1936 meeting at Baltimore. If you will get out your program for this meeting you will find in it the following invitation:

PRESIDENTS' CONFERENCE
Tuesday, Nov. 17, 7 p.m.
Lord Baltimore Hotel

The presidents and presidents-elect of the state medical associations in the South, the states comprising the Southern Medical Association, will have a get-together dinner-meeting for an exchange of ideas—an informal round table on matters of mutual interest. The presidents and presidents-elect of all state societies are most cordially invited to attend this conference meeting. Dr. Harvey F. Garrison, president, Mississippi State Medical Association, Jackson, Mississippi, is the convener of this meeting and is expected to preside.

Each year this conference has grown in interest and attendance, and we know it today as the *Conference of Presidents, Presidents-Elect, Secretaries and Editors.* Its general theme at the St. Louis meeting in November was "Essential Elements in Medical Leadership."

Being president-elect of the next to the greatest medical body on this earth is no small job in itself, yet I find him planning with more earnestness than ever the 1942 *Conference of Presidents, Presidents-Elect, Secretaries* and *Editors.* Although it is entirely separate and apart from the Southern Medical Association meeting, I predict that it will be one of the highlights of the meeting next November at Richmond.

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*(*Presented before the Central Medical Society, Jackson, Miss., Jan.* 6, 1941.)

Gentlemen of the Central Medical Society and the medical profession of Mississippi, I say to you that you and I have been signally honored along with this distinguished son, when the physicians of sixteen states and the District of Columbia elect by unanimous vote one of us to the presidency of an organization like the Southern Medical Association.

My friends, the man who has brought to us such a signal honor should be requested to address us. In giving you your new president-elect of the Southern Medical Association I propose that we drink a toast to him and to the success of his administration as president in 1942-43.

DEFENSE

RESOLUTIONS

Adopted at the quarterly meeting of the Northeast Mississippi Thirteen Counties Medical Society at Houston, Miss., Dec. 9, 1941, two days following the Japanese attack at Pearl Harbor.

RESOLVED, That the doctors of the Northeast Mississippi Thirteen Counties Medical Society in session this the ninth day of December, 1941, realize the national and international situation and feel keenly as citizens of the United States of America the greatest insult our nation has ever suffered; therefore, be it

RESOLVED, That we today pledge and offer to our community, state, and nation, our whole-hearted support in any and every way that we can to protect our homes, loved ones, and nation, and the principles of democracy and freedom; and be it further

RESOLVED, That a copy be recorded on the minutes of this society, and copies be given to the *Mississippi Doctor* and to the president.

Looking over an annual of the United States Military Academy, at West Point, we note these unusual names. Howitzer, Lycan, Clapsaddle, Stocking, Teeters, Tarbox, Jaycox, Goodpasture, Newcomer, Okerbloom, Snoke, Wintermute. What a melting pot is America!

Also among the stalwarts defending our country today are none other than Daniel Boone, John Paul Jones, Woodrow Wilson, Julius Caesar and Christopher Columbus. A Winston Churchill is in our army too. A Dziengielwski, Gosiewski and Sczepankiewicz. This bizarre nomenclature could be extended at length. However, we cannot forbear to make mention of a registree named Noah Harvey Herman Daniel Boone Buster Brown David Longworth, if he lives up to his name he should be a valiant soldier.

But the worst problem arose from a Kalamazoo, Mich., private simply named John Doe. Every time he filled out a form, somebody tossed it aside, figuring it was a sample. It will be interesting to know that the Christopher Columbus named above tried to get in the U. S. Navy but flunked, so he registered for Army service and got, would you believe it, number 1492.

The classic tune, *Sweet Adeline*, long a favorite of off-key harmonizers, is no longer No. I on the barber shop quartet hit parade, an authoritive source reveals. After a careful canvass and much thought, the song most popular with the amateur choristers is *I Had a Dream, Dear*: second spot went to *Mandy Lee*; third place to *Honey*; and fourth position to a former top favorite, *Let Me Call You Sweetheart.*

Wednesday, February 4, 1942, will be the sixth National Social Hygiene Day, to be observed throughout the country by meetings, radio broadcasts, and special publicity. The purpose of this annual event is to maintain and strengthen public interest in the fight against syphilis and gonorrhea and conditions favoring their spread. That fight was never more important than it is in this time of national emergency, when the health and welfare of young men being called up for military service is giving all serious concern. Americans should be strong and clean.

There is little to be said for alcohol beverages; the loss in earning power, debasement of economic value, chronic alcoholics, the thousands of potential addicts, the misery to families, the destructiveness of drink is admitted by all. It is not a medicine but a subtle poison and should be so regarded. To celebrate the birthday of the our Lord by indulgence in alcoholic beverages is a nefarious practice that should be abandoned.

Every effort should be exerted to make our great nation a non-drinking people.

The die is cast, we are now at war; the democracies against the foes of government by the people, in the longest battle-front of human history.

We shall be calm and do our full duty without complaint, and withal be steadfast.

It is comforting to know the solidarity of this hemisphere and that we have as an ally the great nation whose great Prime Minister said, "If you are attacked, we will be with you within the hour."

ERRATUM

The address to the nurses attributed to Dr. V. B. Philpot in last issue by error, was written by Dr. G. S. Bryan of Amory. We are sorry of the mistake, but these two outstanding leaders in the profession always have something constructive to say. This was a fine address.

Deaths

Dr. John Williams Long died at his home in Sallis, Miss., Nov., 26, 1941, following a heart attack. Dr. Long was born in Winston County, Miss., Jan. 7, 1885. He received his medical education at the University of Louisville, Louisville, Ky., graduating in 1908. He was stricken in his drugstore in Sallis and was rushed to his home where he succumbed. Surviving are his wife, one son, Dr. John Wade Long, of New Orleans, one daughter, Mrs. Bob Holmes, and one brother, A. A. Long

Dr. Sol Stain Kaufman, age 35 years, died at Galveston, Texas, on September 3, 1941. Dr. Kaufman was born in Vicksburg, Miss., November 24, 1906. He received his medical education at the University of Illinois, graduating from there on July 1, 1931. He was licensed to practice in Mississippi in January, 1932. He had practiced in Water Valley, La., before moving to Crowley, La., his home at the time of his death.

Dr. Robert Augustus Holcomb, 65, life-long resident of Benton County, died at the Holcomb family home, in Hickory Flat, Miss., December 6, following an illness of several months. He had been practicing medicine for about 50 years in this community. He was a member of the Baptist Church. Surviving are his wife, one son, Thomas Holcomb, Memphis; one daughter, Miss Louise Holcomb, Hickory Flat; one brother, John Holcomb, Cocoa, Fla.

Dr. Harvey Thompson Mounger, Sr., died in a hospital in Jackson, Miss., on September 6, 1941, following a long illness. Dr. Mounger was widely known in the medical profession. He had practiced medicine for a number of years at Hattiesburg but was forced to retire on account of failing health. He received his medical education from the University of the South, graduating in 1907, passing the Mississippi State Board in May, 1908. Dr. Mounger is survived by his wife, a son, Harvey T. Mounger, Jr., and one daughter, Mrs. Jones Hamilton.

Dr. Henry Flowers, of Brookhaven, died at the King's Daughters Hospital December 14, 1941. Dr. Flowers was born at Smithdale, Miss., February 23, 1859; He graduated from the University of Mississippi Medical School and received his M.D. from Tulane University in 1891. Dr. Flowers is survived by his wife, and a son, Henry G. Flowers; also four children by a former marriage, T. Fulton Flowers, Mrs. Thomas D. Hendrix, Mrs. B. M. Seale, and Mrs. J. M. Ewing. He was a member of the Masonic Lodge and had been a steward in the Methodist Church for 60 years. Dr. Flowers retired from practice about 12 years ago. Funeral services were held from the First Methodist Church at Brookhaven, Dec. 15, 1941.

Dr. Ocie Rush Peek of Hickory, 71, died at the Rush Infirmary in Meridian, Dec. 21, 1942. Dr. Peek was born in Penantly, Miss., Oct. 3, 1868. He received his medical education at the Mississippi Medical College, Meridian, Miss., graduating in 1907. He practiced medicine in Hickory for 27 years. Surviving are his wife, four sons, E. A. Peek, of Hazlehurst; G. H. Peek, of Oklahoma City; W. B. and E. A. Peek of Meridian, and one daughter, Mrs. T. E. Ashley, State College, Miss.

Dr. John F. Scarborough, prominent citizen of Port Gibson, died suddenly at his office Thursday, December 11, while listening to a news broadcast. Dr. Scarborough was born in Monticello, Miss., May 6, 1880. He received his education at Mississippi College, Clinton, Miss., the University of Tennessee Medical School, and took postgraduate work in New York. He served overseas during the last war. Dr. Scarborough was a member of the Baptist Church, he was a Mason, a Shriner, and a member of the Hamasa Temple of Meridian and belonged to the Veterans of Foreign Wars. He was Commander of the Owen-Montgomery American Legion Post. Funeral services were held from the First Baptist Church, Laurel. Dr. Scarborough is survived by his wife; his father, D. A. Scarborough; and two sisters, Mrs. J. D. Robinson, and Mrs. J. O. Hughes. Among the honorary pall bearers were Governor Paul B. Johnson, Maj. Gen Thomas Grayson, Maj. Lawrence Long, members Owen-Montgomery Post American Legion; Tri-County Medical Assn., Laurel Medical Staff, L. S. Strickland, M. M. McFatter, T. A. Graves, Redlick, Hugh Woods, and Col. Joe Dixon.

Book Reviews

A PRIMER ON THE PREVENTION OF DEFORMITY IN CHILDHOOD By Richard Vecerly Raney, B.A., M.D., Associate in Orthopedic Surgery, Duke University School of Medicine, Durham, N. C., in Collaboration with Alfred Rivers Shands, Jr., B.A., M.D., Medical Director, Alfred I. du Pont Institute of Nemours Foundation, Wilmington, Delaware. Published and distributed by the National Society for Crippled Children in the United States of America, Inc., Elyria, Ohio. Price $1.00. Contains 188 pages, a glossary and index, and 88 illustrations.

This primer has been written plainly and simply for those who make it possible for the orthopedic surgeon to carry on his work of preventing and correcting deformities. In the first chapter of this volume, the common affections of childhood which may cause deformity are enumerated. The prevention of the affection, insofar as our present knowledge of its cause permits, is described. In subsequent chapters the most important deformities of childhood are described in regional order, their common causes listed, and their prevention discussed.

Mississippi State Medical Association

Organized 1867 **Next Meeting: May 12, 13, 14, 1942, Jackson**

OFFICERS

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Exhibits:

Dr. D. W. Jones, Jackson
Dr. Leon S. Lippincott, Vicksburg
Dr. W. H. Anderson, Booneville

COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	Stanley A. Hill, Corinth	F. M. Davis, Corinth	Third Friday, 6:30 p.m.
Amite	D. H. Thornhill, Crosby	W. T. Thornhill, Crosby	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. P. Walker, Marks	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	H. A. Gamble, Greenville	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	H. M. Wadsworth, Hernando	L. L. Minor, Memphis, Rt. 4	
East Mississippi	W. R. Hand, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	Stanley A. Hill, Corinth	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	S. E. Fields, Centerville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.
Eye—Alston Callahan, Vicksburg.
Ear, Nose and Throat—Edley Jones, Vicksburg.
Obstetrics and Gynecology—J. F. Lucas, Greenwood.
Orthopedics—Thomas H, Blake, Jackson.
Pathology and Clinical Pathology—John C. Henthorne, Jackson.
Pediatrics—Harvey F. Garrison, Jackson.
Public Health—Felix J. Underwood, Jackson.
Radiology and Roentgenology—Karl O. Stingily, Meridian.
Surgery—W. H. Parsons, Vicksburg.
Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

EAR, NOSE, AND THROAT

LABORATORY ANALYSIS OF THE CONTENT OF TONSIL CYRPTS AS OBTAINED BY THE WET SUCTION TECHNIC

G. W. McAuliffe and Marguerite Leask, Archives of Otolaryngology, Volume 34, No. 4, Page 758.

Under this title the authors discuss the "wet suction" technic of treating acute follicular tonsillitis. The apparatus used was a wash bottle containing the irrigating fluid, a collection tube to collect the aspirated material and a glass tonsil tube (three sizes) for application to the tonsil, operated by suction only.

In this method the orifice of the tonsil tube is placed over the tonsil and suction is used. The suction slightly everts the tonsil. at the same time forcing a stream of the irrigating solution directly, into the tonsil crypts, and aspirating the washings. etc. He limited his suction force to fifteen pounds.

He reports a series of fifteen cases in which cultures were taken from (1) the nasopharynx, (2) the tonsil surface, (3) the sublingual area, (4) by his method of irrigation and (5) from the excised tonsil. A study of his chart reveals that the cultures from the irrigation and from the excised tonsil were more or less identical and revealed a larger number of positive cultures than specimens collected from the other three areas.

Incidentally he reports a bacteriological study of cultures of excised tonsils. In a series of 93 cases he found streptococcus hemolyticus beta in a total of 81.8%.

The clinical application of this paper is in the treatment of acute follicular tonsillitis. The authors state "we have seen patient after patient with acute follicular tonsillitis cured by two or three wet irrigations with physiologic solution of sodium chloride." Both acute and chronic cases are treated in this manner and the authors state they have observed no unfortunate complications.

Their conclusions are as follows:

1. Wet suction at 15 pounds is an effective means of ridding the tonsillar crypts of an accumulation of organisms, cells and débris, therapy relieving congestion and inflammation.
2. Wet suction at 15 pounds exerts no action beyond the epithelial lining of the tonsillar crypts.
3. The bacteria flora of an infected tonsil can be ascertained accurately before tonsillectomy by making cultures of the sediment of centrifuged irrigation fluids.
4. Cytologic examination of these sediments is helpful in differentiating between hypertrophy of the tonsil due to infection and that due to normal endocrine activity.

Editorial Comment: This method is apparently an improvement over the old dry suction method. Many years ago the editor used the dry suction method on a few cases of acute tonsillitis and discarded the method because of the ensuing trauma. It seems that it is hardly possible to apply 15 pounds of suction, even with irrigation, to an acutely inflamed tonsil without causing undesirable trauma. However the authors do present an improved method of collecting specimens for culture which might be quite useful in determining whether or not the tonsils are acting as foci of infection.

MODERN TREATMENT OF ACUTE TONSILLITIS BY INJECTION OF BISMUTH COMPOUNDS

Aristides Monteiro. M.D., Rio De Janeiro, Brazil. Edited by Louis E. Silcox, M.D., Archives of Otolaryngology, Vol. 34, No. 4, Page 719.

The author recalled that seven years ago he published the first article on the brilliant results obtained in the treatment of acute lacunar tonsillitis by injection of bismuth compounds. Since that time 46 papers published in Brazil, Germany and elsewhere have dealt with the same subject and the author briefly reviews their findings.

The author states that "if a patient with acute lacunar tonsillitis does not improve within 24 hours after the injection of bismuth compounds and does not recover within 48 hours, a culture for identification of the causative organism should be made. . . . Acute tonsillitis in children which does not respond to bismuth in 24 hours is usually diagnosed as either diphtheria, staphylococcus or pneumococcus."

He states that this procedure finds its greatest application in children in whom the disease has an average duration of 6 to 8 days. With his method of treatment he claims the duration is shortened to 24 hours.

The dosage varies with the age of the patient and solubility of the bismuth preparation employed. The author states "for young infants, 1 to 5 mg. of a soluble bismuth preparation and 1 to 2 cg. of an insoluble preparation, according to age, is used. The adult dosage should not exceed 2 cg. of a soluble bismuth compound in 24 hours and 5 cg. of an insoluble bismuth compound in each dose."

The author further states that there are no contraindications except cardiorenal disease or a severe affection of the renal apparatus by an intercurrent disease. In cases in which tonsillitis is the cause of renal impairment, administration of bismuth is indicated to remove the focal element.

One of the South American authors, Marinho, is so enthusiastic over this method of treatment that he has presented a new classification of tonsillitis: "serum tonsillitis" and bismuth tonsillitis. If the case does not respond to two injections of bismuth, it is not a "bismuth angina."

Editor's Note: For some years it has been the editor's practice to use bismuth injections to any case of acute tonsillitis in which there appeared to be any Vincent's organisms. While uniformly good results have been obtained, the editor has not noted the brilliant results which aroused the anthusiasm of the South American and German essayists. However the method has few contraindications and is simple enough to warrant a trial.

PEDIATRICS

HYPERTROPHIC PYLORIC STENOSIS IN INFANTS: —A RESULT OF BIRTH INJURY—J. G. Flynn—Texas State Journal of Medicine, 37: 367 (September) 1941.

It occurred to the writer that perhaps injury or irritation of the parasympathetics at the time of delivery might have some bearing on the appearance of hypertrophic stenosis but a search of the literature disclosed no mention of this relation.

"The clinical picture of the appearance of symptoms of inability to empty stomach contents through the pylorus, usually at the age of 1 to 5 weeks, in an infant seemingly normal at birth, has led to this study."

The writer has collected a total of 99 cases in the hospitals of Houston from January, 1937, to January, 1940. No cases were accepted in this series unless the diagnosis was made by x-ray examination, surgical operation, or autopsy. There were many more diagnosed clinically by vomiting, palpation of a tumor mass, loss of weight, etc., which improved under thick feedings, sedatives and antispasmodics, and which in all probability were mild or borderline cases. Ten were discarded when the pyloric stenosis was found to be due to either congenital atresia or developmental bands across the duodenum to the under surface of the liver. It is of interest to note that these cases had a history of vomiting from birth.

"With regard to sex, the condition is seen more frequently in males; in this series there were 85 males and 14 females.

"The weight of the infants is above average; the average in this series was 8 pounds, 3 ounces. Only three were under 6 pounds.

"Fifty-five per cent was firstborn. Of course, there are more firstborn than later. There was only one instance of two in the same family, but this series covered only three years. With the same accoucheur there will perhaps be more.

"With regard to delivery, 93 were vertex presentations, 4 breech, and 2 were delivered by cesarean section. Many had selective forceps and episiotomies. The length of stay in the delivery room was comparatively short.

None followed precipitate delivery without the aid of the doctor. Only one had been delivered by a midwife, and 85 were hospital deliveries. Anesthetics used included rectal, general, spinal, intravenous, and varied from light to complete narcosis."

"One of the anesthetists, knowing of this study, made a notation on his private record that there was severe "neck-stretching" on a 6½-pound baby. This infant was readmitted 17 days later with pyloric stenosis and a Rammstedt operation was done.

"With regard to the age at the onset of symptoms, one infant developed symptoms on the ninth day postpartum, one on the tenth, two on the twelfth, and the others from two to seven weeks after birth. The average for all was the twenty-sixth day.

"In present-day obstetrics there is undoubtedly a tendency on the part of a large group of physicians to 'deliver' the baby rather than allow the mother to give birth." Such interference, especially the maneuver after the head is born. of depressing and traction in order to get a finger in the axilla of the anterior shoulder instead of allowing the uterine contractions to rotate the shoulders normally would be very likely to injure or irritate the parasympathetics.

"TREATMENT. There are many babies spoken of as "hypertonic infants," as evidenced by spastic muscles, increased reflexes, strident crying, pylorospasm, and regurgitation of food, but not developing obstructive symptoms sufficient for surgery. The pediatricians have many of these that recover with careful attention to feedings, antispasmodics, sedatives, and so forth, that are possibly mild hypertrophic stenosis. Perhaps an indefinite number of others never get in their hands, and either die or recover without diagnosis, and are considered "difficult feeding" cases. Even the "three months" colic babies may be borderline cases with the same pathologic changes.

"The surgical treatment, fortunately, has become fairly well standardized. The Rammstedt operation seems to offer less risk and better results than the more radical procedures, such as pyloroplasty, gastroenterostomy, and so forth. In this series there were a number of postoperative duodenal fistulas from accidentally penetrating the mucosa, with recovery. Some of the infants had to be reoperated on as the constriction or obstruction was not relieved. Two of the surgical deaths were due to aspiration pneumonia or strangulation and were certainly preventable if the infants had had adequate postoperative care. The vitality of these little patients is surprisingly good, but the careful coöperation in the preparation and postoperative care is of equal importance to the surgical operation itself, and lowers by more than half the death rate.

The author says it is quite logical to assume that this injury to the parasympathetics could also be caused by intra-uterine conditions of position, such as angulation or changed presentations."

"This report is not intended to be dogmatic. It is offered as a thought in order that all will bear the condition in mind, and by careful observation decide whether there could be a reduction in the incidence of hypertrophic pyloric stenosis by allowing the mothers to have their babies, rather than 'deliver' them."

COMMENT

Since I am one of the first physicians in Mississippi to have diagnosed and operated hypertrophic pyloric stenosis, I feel that this article is well worth the time spent abstracting, and timely for the physicians of Mississippi to read. The author's opinion in regard to the cause of the condition is a little out of the ordinary, yet it is well worth thinking about. In my experience there are one or two things that should be emphasized: first, that many cases can be corrected without operation if properly handled; and second, if and when operated, the operator should be extremely careful to cut all the circular fibers that are constricting the pylorus—*Cut to, but not through the mucosa.* This is an extremely important point. I have found that many surgeons fail to release all of the little circular fibrinous bands; and if this is not done, the operation will be a failure. It frequently happens that if just one or two of these circular fibers are left without being severed, they will continue to cause the same trouble. This is an extremely delicate operation. It is very tedious, and the operator must be very careful to see that both of these conditions are met to accomplish a successful operation.

State Board of Health

Felix J. Underwood, M.D.

CHECK VENEREAL DISEASES TO STENGTHEN DEFENSE

Since the declaration of war the venereal disease problem has taken on increased national defense significance. Communicable disease control precedes in importance almost all other public health activity during mass troop movements and mobilization, because both civilian welfare and military fitness are dependent upon freedom from epidemic disease. Syphilis and gonorrhea head the list of all other communicable disease problems at the present time, which means that the efforts of physicians and health workers must be increased in order to achieve maximum military efficiency. Certainly in this emergency, there can be no half-way measures; it must be an all-out program. This is one of the many phases of national defense in which the medical profession can help tremendously by treating as many cases as possible and by coöperating closely with the program of their local health departments. Contact-tracing of infectious cases must be increased to the limit of available facilities. Selectees having syphilis or gonorrhea should be placed under treatment immediately so that they can be ready for military duty at the earliest possible date.

Venereal disease control activities in Mississippi, conducted in coöperation with the state and local health departments, were presented to the December 9 meeting of the State Board of Health in a report prepared by Dr. D. V. Galloway, supervisor of the Division of Venereal Disease Control, as follows:

Venereal Disease Control

On December 1, 1941, fifty-five counties in Mississippi had organized venereal disease clinics. The clinic totaled 186. This is an increase of five counties and eight clinics over the number previously reported in June, 1941. The most recently added counties are Kemper, Rankin, Claiborne, Clarke, and Wayne. All of the counties now carrying on syphilis control activities are also treating gonorrhea when found as a complication of syphilis. It was not thought possible to put on a large scale gonorrhea treatment program due to the limited funds available.

Approximately two hundred new cases of gonorrhea are being admitted to the clinics and treated each month. Sulfathiazole is the drug of choice in the treatment of this disease and appears to be giving satisfactory results. Most of the health officers report that sulfathiazole cures gonorrhea in approximately eighty per cent of the cases.

The national defense areas of the state are becoming a greater and greater problem. Hattiesburg is the chief center with approximately fifty thousand soldiers at Camp Shelby. Keesler Field at Biloxi has approximately twenty-three thousand soldiers and, approximately five thousand soldiers spend week-ends on the Gulf Coast at the recreational centers. There are now five air bases in the state where the soldier population will vary from three to four thousand: namely, Jackson, Meridian, Greenville, Greenwood, and Columbus. There are two industrial defense areas—the Pascagoula shipyards and the Flora ammunition loading plant.

The following table shows the syphilis control activities carried on in clinics over the state from January through October, 1941.

SYPHILIS CONTROL ACTIVITIES

1941	New Syphilis Cases	Cases Syphilis Discharged	Arsenical Treatments Administered	Heavy Metal Treatments Administered	Total Clinic Visits For Treatments
Jan.	3,538	1,571	19,591	18,394	42,234
Feb.	1,995	1,320	19,110	19,803	41,948
Mar.	2,075	1,443	21,053	23,920	49,645
April	2,486	1,216	25,339	26,820	58,336
May	2,367	1,678	26,773	26,173	58,914
June	2,470	1,867	27,126	26,272	59,546
July	2,384	1,669	28,910	30,733	66,853
Aug.	1,782	1,490	25,343	28,218	59,802
Sept.	1,496	1,758	21,362	25,024	51,425
Oct.	1,217	1,781	22,134	21,087	47,646
Total	21,760	15,793	236,741	246,444	536,349

Provisional Death Statistics for 1941

Dr. R. N. Whitfield, director of the Division of Vital Statistics, reports the following, which have been gleaned from provisional tabulation of deaths during the first six months of 1941 in Mississippi:

Typhoid fever	9
Undulant fever	1
Meningococcus meningitis	26
Scarlet fever	2
Whooping cough	69
Diphtheria	10
Typhus	1
Syphilis	210
Pellagra	50
Cerebral hemorrhage and other intracranial lesions of vascular origin	880
Tuberculosis	495
Influenza	757
Poliomyelitis	7
Cancer	684
Heart disease	1,839
Pneumonia	556
Motor vehicle accidents	246

Deaths from accidents show a sharp upward trend for the year. There was a marked increase in general accidental deaths each month over the same month last year; and this was found to be particularly true of automobile accident deaths, which increased nearly 40 per cent over the first six months of 1940.

Influenza and pneumonia exacted a toll of 700 deaths during January of this year. In June, the deaths from these causes totaled only 50. In January, 1940 the total was 363; in June, 1940, it was 38.

Heart disease and cancer continue to take the greatest toll. The deaths from these two causes during the first half of 1941 totaled 1,839 from heart disease, and 684 from cancer.

Diphtheria

Dr. A. L. Gray, director, Preventable Disease Control, reports that the incidence of diphtheria in Mississippi was higher during the first ten months of the year during the same months in 1940, there having been 321 cases through October this year compared to 283 for the same period last year. Another indication of the higher incidence in 1941 over last year is that in October this year there were 84 cases compared to 59 cases for the previous year. In fact, the incidence of every month has been higher than for the same months last year and this increase may be expected to prevail through November and December and even through the first part of 1942, when reports have been finally tabulated. Physicians can prevent much suffering and loss of life by administering sufficient antitoxin to diphtheria cases. Use only antitoxin which has been kept properly refrigerated in a mechanical refrigerator.

County Health Departments Personnel

Dr. H. H. Rutledge has been nominated to the Tate County board of supervisors for appointment as director of that department. He formerly served as a county health officer in Kentucky. Dr. I. Chester Farmer, who served as previous director of this department, resigned several months ago to enter private practice at Cruger, Mississippi.

Dr. Victor P. Genge was appointed director of the Lafayette County Health Department on December 1 to fill the position which had been left vacant through the resignation of Dr. T. L. Owings. Doctor Owings moved to Alabama to take up the private practice of medicine. Doctor Genge has had wide experience in public health work and has lately been employed as a county health officer in Florida.

On October 1, the Chickasaw County board of supervisors made an appropriation for the support of a full-time county health department. This full-time department was organized on November 15, with Dr. J. W. Dugger, director of the Division of Industrial Hygiene, and Dr. Eva Linn Meloan, recently associated with the Lauderdale County Health Department, directing the activities. Officers will be maintained in both Houston and Okolona for rendering health services.

Through an appropriation made by the Clay County board of supervisors a full-time health department will be organized in Clay County on January 1, with headquarters at West Point. Dr. George E. Riley, epidemiologist, State Board of Health, will temporarily serve as acting health officer until a permanent appointment is made. Other staff members will be appointed to their respective positions when officers have been selected.

Dr. Ragnar T. Westman, surgeon (Reserve), United States Public Health Service, has recently been assigned to the Mississippi State Board of Health for duty in the Lowndes County defense area. Doctor Westman will be associated with the Lowndes County Health Department and will serve as liaison medical officer in the nearby counties which may be affected by the army air base which is located near Columbus. Doctor Westman served as epidemiologist in the Division of Public Health, Minneapolis, Minnesota from 1932-1937. In 1937 he served as county director of health, Bay County, Michigan. In 1938 he resigned this position in order to complete his study toward the degree of Doctor of Public Health. During the past two years he had been employed as director of health in Kansas City, Kansas.

Dr. R. A. Brannon, Jr., who has been practicing medicine in Utica, Mississippi, became associated with the Mississippi State Board of Health on November 16, at which time he reported to the Lauderdale County Training Center. Doctor Brannon is a graduate of the Tulane Medical School and recently completed his internship in the Tennessee Coal and Iron Hospital at Fairfield, Alabama.

Dr. Justin E. Sandness, Reserve Officer of United States Public Health Service, who was assigned to Mississippi for duty in defense areas and had recently been serving as assistant health officer in the Forrest County Health Department, was nominated to the Yazoo County Board of Supervisors on December 1 to serve as acting health officer. Dr. C. A. Bailey who has been serving as acting director of this health department requested to be relieved of duty in order to accept the position of Superintendent of the American Hospital, Mexico City. Doctor Bailey had formerly served with the International Health Division of the Rockefeller Foundation in Mexico for about ten years prior to his retirement in September, 1940.

County Societies

AMITE-WILKINSON COUNTIES SOCIETY

The regular meeting of the Amite-Wilkinson Counties Medical Society was held in the board room of the Field Memorial Hospital, Centerville, December 11, when a delightful Christmas dinner was served by Miss Neyland. The meeting was well attended by the doctors of both counties and their wives.

The society was honored in having as its guest speaker for the evening, Dr. Dan Williams, of Gulfport, who is doing special health work in Wilkinson County. Dr. Williams' talk was rich in reminiscences and experience from many years of personal effort in promoting the health and happiness of the people of the coastal counties. He enjoys the distinction of being third oldest member of the Mississippi State Medical Association.

Miss Coen, a public health nurse assisting Dr. Dan, was also a welcomed guest.

The following officers were elected for the ensuing year:

Amite County—
- Dr. D. H. Thornhill, President.
- Dr. Anderson Butler, Vice-president.
- Dr. W. T. Thornhill, Secretary and treasurer.
- Dr. Paul Jackson, Delegate
- Drs. D. H. Thornhill, W. T. Thornhill and Paul Jackson, Censory committee.

Wilkinson County—
- Dr. S. E. Field, President
- Dr. Brannon, Vice-president
- Dr. R. J. Field, Secretary and treasurer.
- Dr. Charles Catchings, Delegate
- Drs. S. E. Field, R. J. Field and Dr. Brannon, Censory committee.

EAST MISSISSIPPI MEDICAL SOCIETY MEETING

The East Mississippi Medical Society held its regular quarterly meeting in the Lamar Hotel, December 11. Dr. T. C. Cleveland, president, presided at the scientific program which was put on by the University of Tennessee as follows:

"Throat Infections as Seen by the General Practitioner"—W. L. Simpson, Memphis.

"Nutritional Deficiencies of Infancy and Childhood"—A. G. Jacobs, Memphis.

DINNER—6:00-7:00 P. M.

"The Gallbladder from the Internist's Standpoint"—J. M. Bethea, Memphis.

"The Gallbladder from the Surgeon's Standpoint"—C. H. Avent, Memphis.

Following the banquet, a business session was held. Dr. W. R. Hand, of Philadelphia, was unanimously elected president to serve the society for 1942. No other officers were elected at this time.

Dr. J. R. Priest, Jr., of DeKalb, applied to transfer his membership from the Northeast Mississippi Thirteen Counties Medical Society. His transfer was unanimously approved .

Ole Miss Medical School

The Ole Miss Medical School will probably open its next session in the summer instead of the fall of 1942. The advance in the school schedule will be in accord with proposed plan for all medical schools to shorten the over all-time for medical education by discontinuing the usual vacation periods. The plan is being considered by all of the medical schools, although several schools have already announced their acceptance of the proposal.

The proposed new medical school schedule will be operated for the duration of the emergency and in behalf of national defense. The results of the change will be to shorten medical education by one year and make available much needed physicians for national defense purposes. The plan in no way lowers the present standard of medical education. While final arrangements have not been made, definite announcements are expected in the very near future.

The medical students completing the two-year course at the University of Mississippi in the spring of 1942 have been advised that they will, in most cases, be expected to begin their third year work about July of 1942. Arrangements have been completed for the transfer of all the students to the medical schools of other universities. The allocation is announced as:

BAYLOR UNIVERSITY, Edgar W. Santa Cruz, Gulfport; HARVARD UNIVERSITY, James M. Brock, B.A., McComb; JEFFERSON MEDICAL COLLEGE, Henry C. Ricks, Jr., B.S., Jackson, John C. Beard, Jr., B.S., Heathman; NORTHWESTERN UNIVERSITY, Van R. Burnham, Jr., Ruleville, Max Pegram, B.A., Tupelo; TULANE UNIVERSITY, Robert J. Barnett, B.A., Greenwood, Nathan D. Feibelman, B.A., Vicksburg, Max L. Golden, Laurel, Wendell B. Holmes, Tylertown, Archie C. Miller, B.A., Hazlehurst; UNIVERSITY OF LOUISVILLE, David W. Griffin, Meridian; UNIVERSITY OF PENNSYLVANIA, Man[illegible] [illegible]udson, B.A., New Albany; UNIVERSITY OF TENNESSEE, Henry J. Brown, B.S., Iuka, Ersel A. Crawford, Philadelphia, Charles P. Crenshaw, B.S., Lucedale, Rudy J. Ellis, B.S., Vicksburg, James R. Flautt, B.S., Swan Lake, Cecil J. McCarty, Hattiesburg, James R. Foster, B.A., Shelby, William F. McDonnell, Jr., B.S., M.S., Biloxi, Henry J. Kellum, B.A., Tupelo; UNIVERSITY OF VIRGINIA, Ben N. Walker, B.A., Jackson; VANDERBILT UNIVERSITY, Samuel E. Izard, Jr., B.S., M.A., Newhebron, Samuel R. Staggers, B.A., B.S.E., West Point; WASHINGTON UNIVERSITY, Frederick M. Cook, B.A., B.S., Clarksdale, William H. Jones, B.A., French Camp.

Mississippi State Sanatorium

PLEURISY WITH EFFUSION

Tuberculosis is again on the increase as has been recently pointed out in the papers by releases from the National Tuberculosis Association. This increase is apparently due to the increased industrial activity in the war effort.

A very common mode of onset of pulmonary tuberculosis is pleurisy with effusion. Unfortunately, the seriousness of pleural effusion is not well understood because few doctors have the opportunity to follow the case to its conclusion.

The following is a very brief outline of pleurisy with effusion as we have seen it at the Mississippi State Sanatorium:

Age: Adolescence to the fifth decade.

Onset: May occur with chills and high fever and is frequently mistaken for pneumonia. Pain in side disappearing after a few days with onset of slight fever and malaise.

There may be nothing but shortness of breath due to accumulation of a large amount of fluid in the chest.

Course: In many cases the pleural effusion will absorb in time. If the fluid is aspirated, usually a clear yellow fluid is obtained and the remainder of the fluid will disappear in a few weeks. The dangerous period is now present, because the patient feels as well as ever and after the fluid absorbs an x-ray of the chest usually appears perfectly normal. The patient may remain well for as long as five years or more. The patient then develops a diffuse proliferative type of pulmonary tuberculosis that resists all efforts to control the advance of the disease. The pleural cavity is obliterated so that pneumothorax cannot be given and other types of collapse therapy are out of the question.

TREATMENT: The only treatment that we have found of any value is the use of pneumothorax early after the onset of symptoms, that is, as soon as possible because adhesions may form between the visceral and parietal pleurae within the first few days. The object of the pneumothorax is to keep the visceral and parietal pleurae apart for at least a year to allow the fibrosis of the tuberculous foci in the pleura itself. If pneumothorax cannot be given, due to failure to institute it early in the disease, the patient should be kept in bed for at least a year. The patient should be followed by frequent x-ray of the chest (four x-rays a year) for about ten years.

All effusions should be considered tuberculous until proved otherwise because of the high mortality rate of this disease. The seriousness of the disease is not well recognized because the death occurs so many years after the onset. If pneumothorax therapy is not initiated until after a positive culture or guinea pig is obtained, it will not be effective in most of the cases. Although smears of the fluid are rarely positive for tuberculosis, cultures and guinea pig inoculations are positive in about sixty per cent of cases; however the subsequent course proves that almost one hundred per cent of pleurisy with effusion is tuberculous.

Woman's Auxiliary

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PREVENTORIUM BOOSTED BY NORTHEAST AUXILIARY

At the December meeting of the Northeast Mississippi Thirteen Counties Auxiliary, at which Dr. and Mrs. Henry Boswell were guest speakers, the members demonstrated their interest in the work of the Preventorium by a contribution. The meeting was held at the home of Mrs. V. B. Philpot, of Houston.

Mrs. Boswell spoke on "Objectives and Its Accomplishments of the Auxiliary." The subject of Dr. Boswell's talk was "What the Auxiliary means to Doctors and Some of the Capacities in Which it Can Serve," the keynote of which was service.

WE SHOULD KNOW IT

Auxiliaries in every state are this year stressing the platform of the American Medical Association. It follows.

The American Medical advocates:

1. The establishment of an agency of the federal government under which shall be coördinated and administered all medical and health functions of the federal government exclusive of those of the Army and Navy.

2. The allotment of such funds as the Congress may make available to any state in actual need, for the prevention of disease, the promotion of health and the care of the sick on proof of such need.

3. The principle that the care of the public

health and the provision of medical service to the sick is primarily a local responsibility.

4. The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control administration.

5. The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.

6. In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.

7. The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability.

8. Expansion of public health and medical services consistent with the American system of democracy.

SEND IN YOUR MEETINGS

The Auxiliary section needs an account of your meetings and activities. Won't you please send them to the press and publicity chairman?

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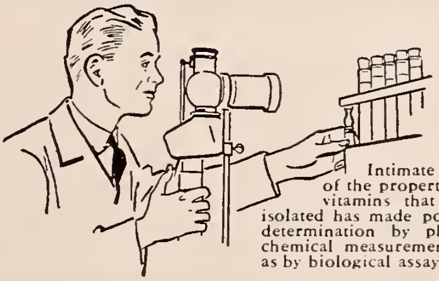

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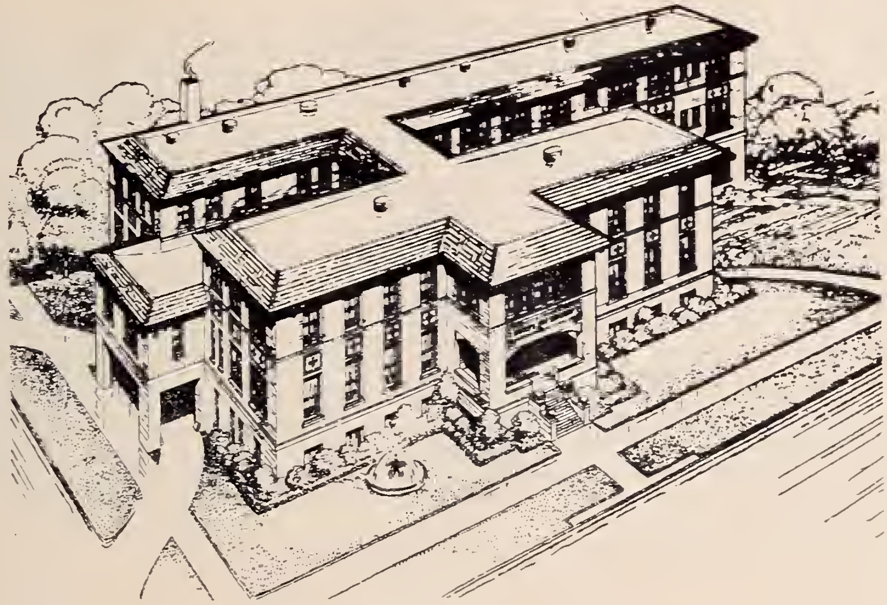

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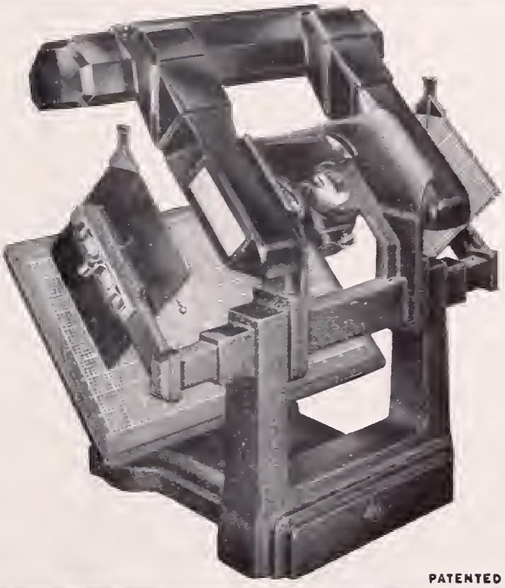

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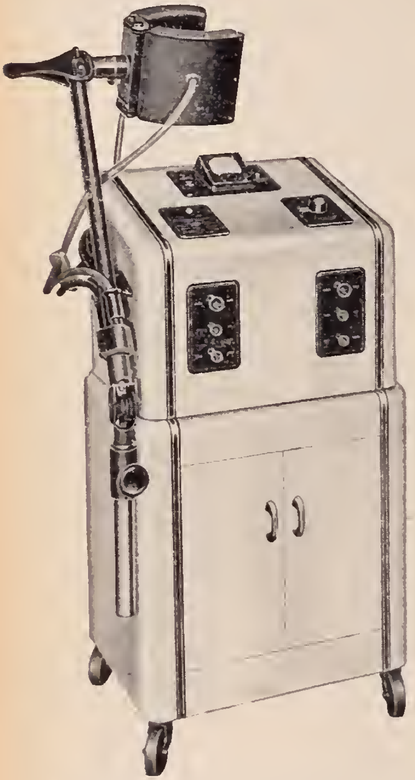

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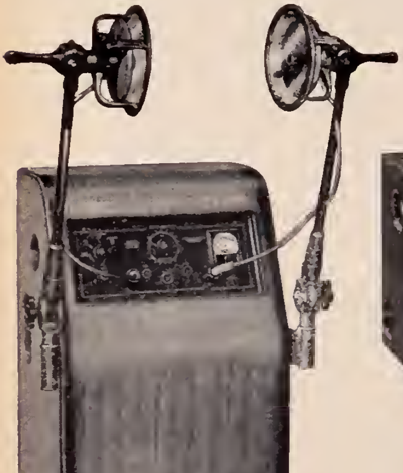

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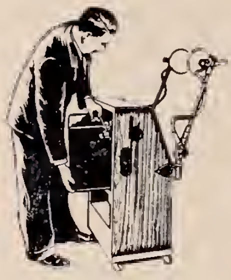

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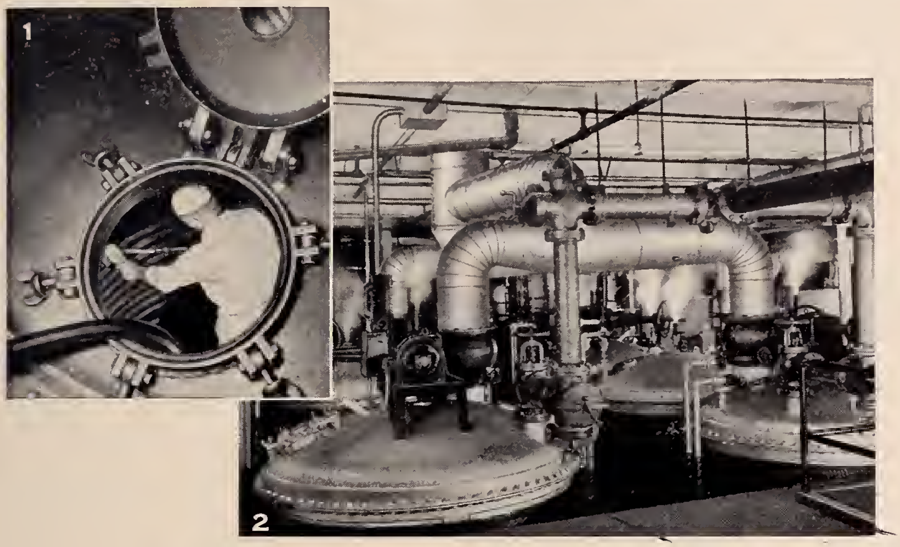

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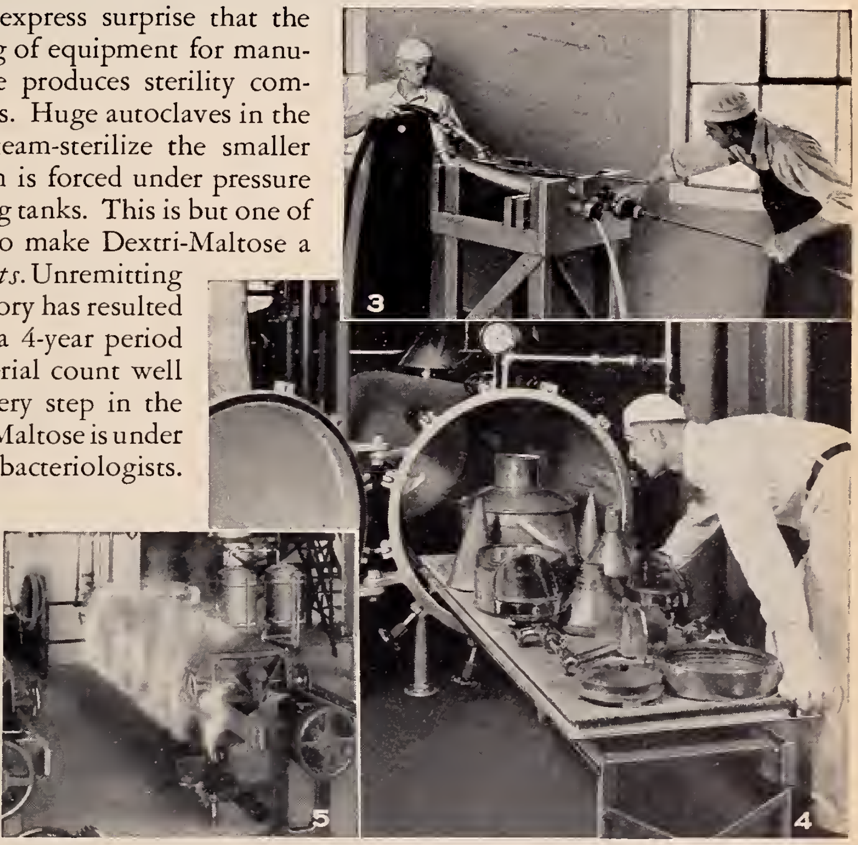

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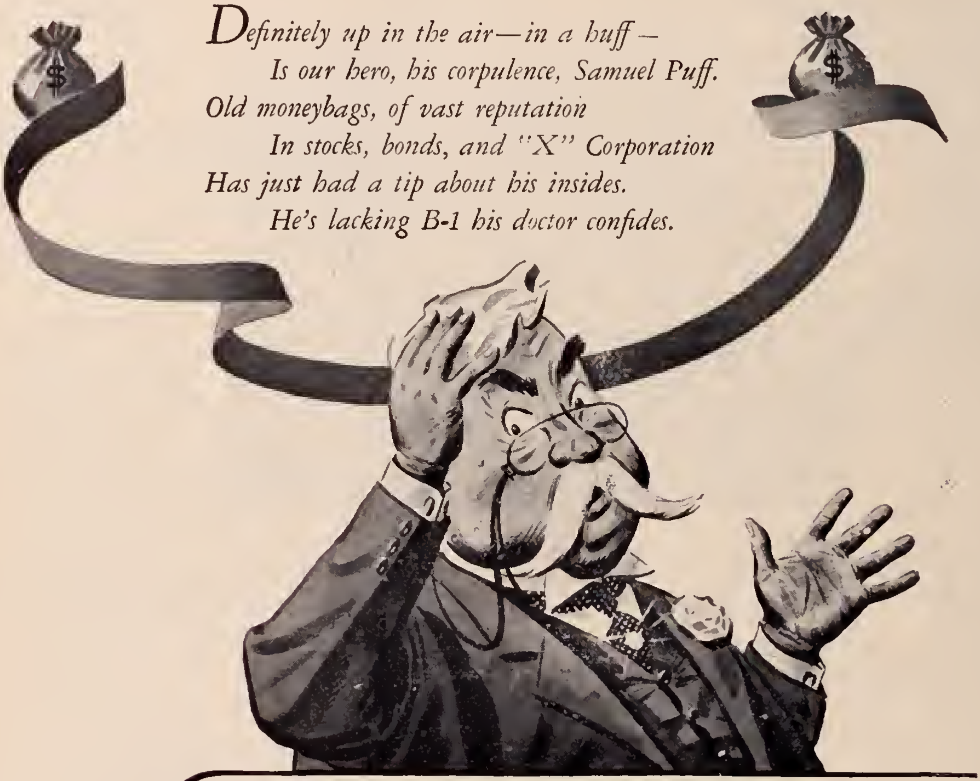

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*Reimann, H. A.: Treatment in General Medicine, 1941 Progress Volume. Phila., F. A. Davis Co., 1941

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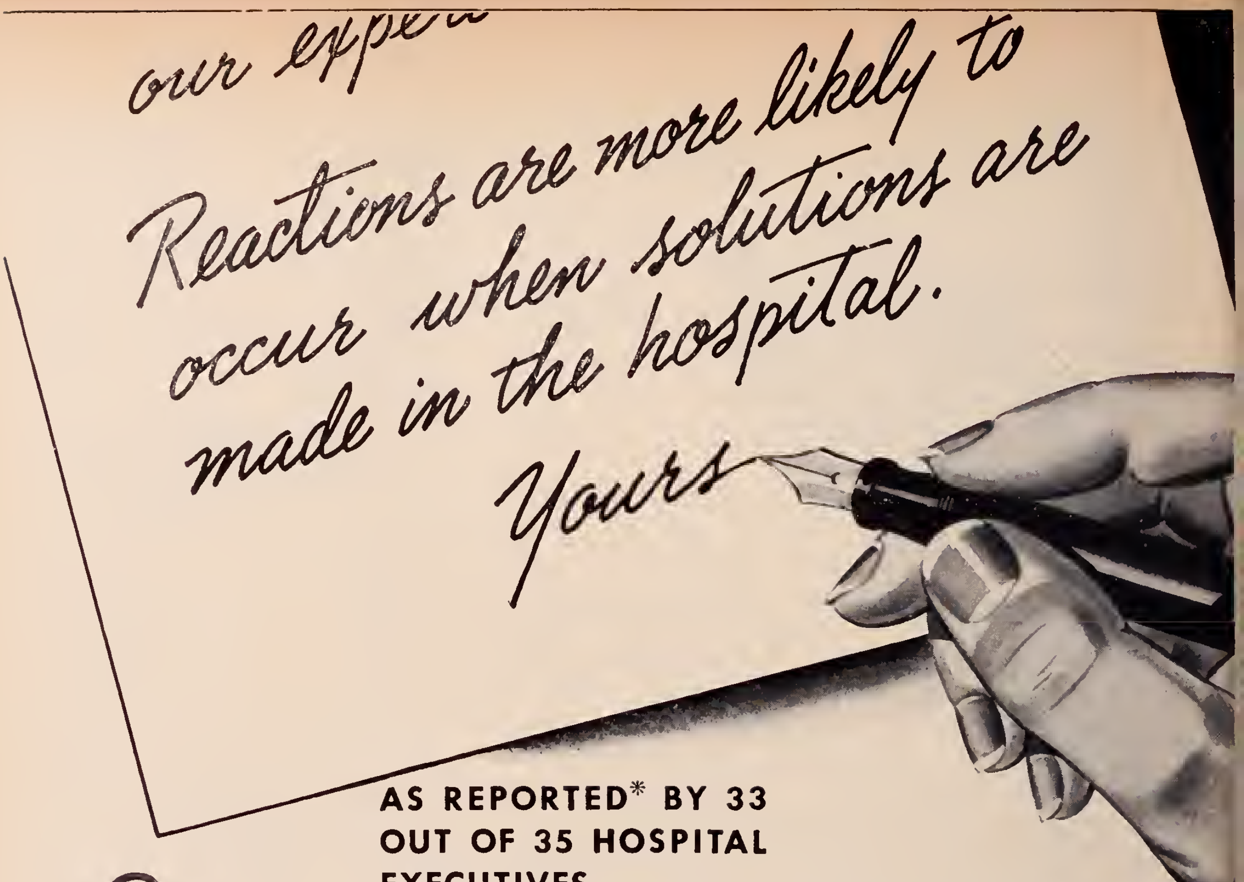

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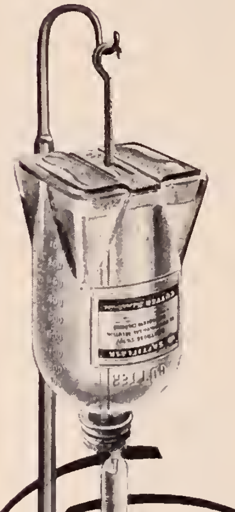

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*Hospitals Report Current Practices in Use of Intravenous Solutions: *Hospital Management*, *Dec., 1940.* Reprints available.

#A Study of Hyperpyrexia Reaction Following Intravenous Therapy, *Horace M. Banks, A. J. of Clin. Path. 4:3.* Reprints available

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Treatment of Facial Fractures by Wiring Fixation

WM. MILTON ADAMS, M.D.
MEMPHIS, TENNESSEE

IN VIEW OF THE constantly increasing number of fractures of the facial bones in civilian life and the imminent probability of a still greater number during the present war, there is an obvious need for a method of treatment of such fractures which is simple and quickly applied, affords adequate immobilization, and at the same time is sound in principle. After using numerous types of extraoral appliances, including those attached to plaster head caps, for immobilizing fractures of the maxilla and other facial bones, the author has found that these appliances are complicated, their preparation and application are time-consuming, they are cumbersome and uncomfortable for the patient, and they require close watching and repeated adjustments on the part of the surgeon. Further, although satisfactory results can be obtained with extraoral appliances, complete immobilization is impossible and, as a consequence, bony union is necessarily delayed.

During the past seven years the author has treated 84 fractures of the maxilla, either alone or combined with fractures of the other facial bones. Until two years ago, some type of extraoral appliance was generally employed in these cases. Since then, 38 fractures have been treated. Of this group, open reduction and fixation by wiring of the fractured parts to the neighboring unfractured bony structures was carried out in all cases wherein immobilization was required, with three exceptions; in these three, open reduction was contraindicated and it was necessary to resort to the use of an extraoral appliance.

This method not only meets the requirements of facility of operation, complete immobilization, and sound surgical principles, but it is applicable to practically every type of fracture of the facial bones. The procedure may be carried out with only a pair of pliers, a small drill and dissecting set, and a spool of fine stainless steel wire. Since complete immobilization is obtained, repeated adjustments are unnecessary, and the patient is spared much discomfort and inconvenience. Patients are usually able to resume their activities after the tissues have recovered from the acute stage of the injury, and when healing is complete, the wires are easily removed. Regardless of how extensive the fractures, immobilization by this method has proved far simpler and more satisfactory than by the use of extraoral appliances attached to plaster head caps.

Undoubtedly, in the exceptional case, extraoral appliances are essential, and therefore should be included in the armamentarium of every surgeon who does this type of work. In the presence of infection, particularly in compound fractures, open reduction is definitely contra-indicated. Even here, however, an extraoral appliance may be required only for temporary immobilization; after the infection subsides, one may remove the appliance and wire the fragments together.

The treatment of fractures of the facial bones must of course be individualized. In greenstick fractures of the maxilla with only slight malocclusion of the teeth, for example, immobilization by open reduction or extraoral appliances may not be necessary. Motion of the lower jaw against the upper will gradually shift the teeth into occlusion.

DIAGNOSIS. In acute injuries of the face, the surgeon should have no difficulty in recognizing gross fractures of the facial bones, even without roentgenograms. Although roentgenograms afford valuable information and should be made in all cases as soon as the condition of the patient permits, as a rule, an accurate diagnosis may be made by careful inspection and palpation. Examination by palpation should be carried out on both sides at the same time, with special attention to any asymmetry, irregularities or crepitus.

In fractures of the maxilla with downward displacement, inspection will reveal an elongation of the middle third of the face; if the maxilla has been depressed backward as well, the patient will have a "dishpan" face, particularly if the nasal bones are also depressed, and the teeth will be in malocclusion.

In any facial injury, one should always determine whether the upper jaw is movable. This is easily accomplished by grasping the upper teeth between the fingers of one hand while supporting the back of the head with the other hand. Motion may be up and down or from side to side. When up and down, movement of the infraorbital ridges may often be detected. One should also observe whether motion of the lower jaw is limited on opening and closing or in the shift from side to side.

Roentgenograms should be made routinely in the posterior-anterior and lateral views, and should include all the facial bones of both the upper and lower jaws. Some fractures, especially those of the temporomandibular joint, may not be demonstrated in these routine films. When such fractures are suspected, roentgenograms in special views should be made.

Anesthesia. If the bony fragments are not impacted and reduction is possible by manipulation, the procedure may be carried out under local anesthesia. In more difficult cases, a general anesthetic is necessary, the type depending largely upon the skill of the anesthetist. Intratracheal anesthesia and sodium pentothal are both satisfactory, but should be given only by one well trained in their administration. When there is any doubt as to the choice of the anesthetic, the use of ether by the open method is advisable.

Technic. After the diagnosis has been made, one should visualize the fractured parts in their architectural relationship to the normal bony structures, without regard to the overlying soft tissues. The treatment then should be relatively simple. The soft tissue wounds should of course be treated in the usual manner.

Fractures of the maxilla are rarely encountered alone; rather, they are generally associated with fractures of one or more of the other facial bones, including the mandible. Since the maxilla is the foundation structure, accurate apposition and immobilization of this fracture is of prime importance; once this is done, immobilization of the secondary fractures offers little difficulty.

In carrying out this method of open reduction and fixation of fractures of the facial bones, it is necessary to make an incision at only one of two sites: overlying the infraorbital ridge, or at the lateral margin of the supraorbital ridge, depending upon the bones involved. In the event of a laceration over either of these areas, the wires may be inserted through the wound.

In simple unilateral fractures of the maxilla, a small incision is made over the infraorbital ridge on the affected side, and a hole of only sufficient size to accomodate a No. 25 or 26 wire is drilled through the ridge lateral to the infraorbital foramen. In drilling the hole, one should be careful to avoid going deeply enough to enter the antrum. A No. 25 or 26 stainless steel wire is next threaded through the opening, looped over the ridge, and both ends are passed together along the anterior wall of the antrum into the upper sulcus above the second molar teeth, where they are caught with a hemostat. One is surprised at the ease with which the wires are directed to the desired point of exit without the use of a guide. The fractured bone is then elevated to its normal position and the wires are drawn taut and fixed to one or more of the teeth. The use of the loop around the infraorbital ridge is much more simple than tying the wire, and its subsequent removal is much easier.

If the patient is edentulous, the wires may be attached to the false plate, provided it is intact; otherwise, dental wax may be molded around the alveolar ridge and over the hard palate, the wires drawn across the palate and tied in the midline, and the ends imbedded in the wax.

Once the wires enter the contaminated field of the mouth, they should not be drawn upward through the soft tissues. If removal is necessary, the loop should be cut and the wires withdrawn from below.

Should the maxilla be separated in the midline, the teeth on the fractured sides are fixed to those of the sound side. In many cases, a simple loop of wire is sufficient, though in more complicated cases, with loss of the teeth, an arch band may be required.

In fractures of the maxilla associated with comminuted fractures of the infraorbital ridge, it is sometimes necessary to immobilize the major fragment of the ridge to the outer half. This may be done through the same soft tissue incision. An additional hole is drilled through the medial fragment, and a small loop of wire is inserted through the two holes and tied. The smaller fragments, after restoration to their normal position, will usually remain in place, being supported by the immobilized large fragment. Following wiring fixation of the infraorbital ridge, intra-antral packing with gauze or other substance is unnecessary.

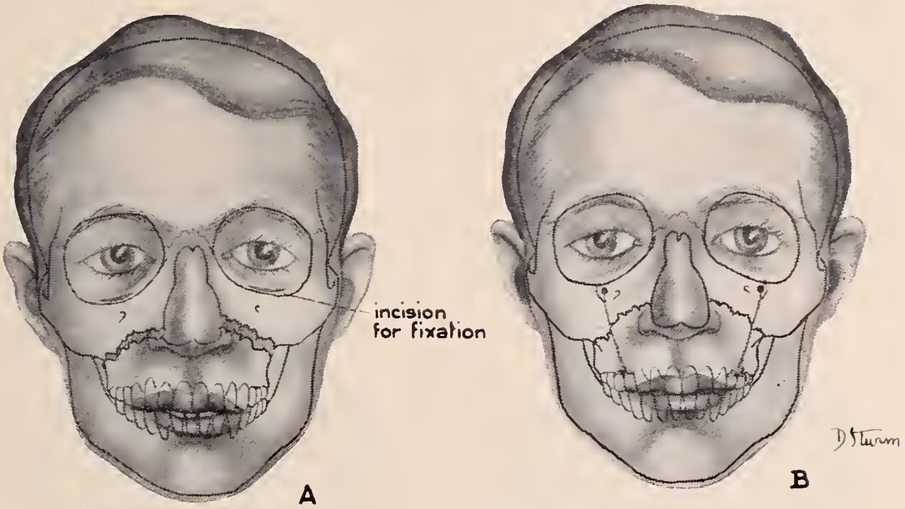


Fig. 1. A. Complete bilateral horizontal fracture of maxilla. B. Maxilla elevated and maintained in normal position with wires extending from the infraorbital ridges to the upper teeth.

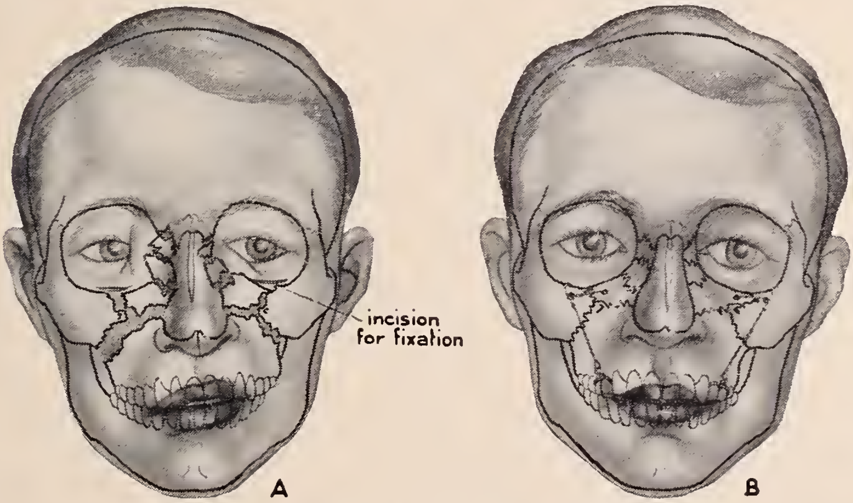


Fig. 2. A. Complete bilateral fracture of maxilla with comminuted fractures of nasal bones and infraorbital ridges.
B. Maxilla held in position by wires from the malar bones to the upper teeth. Lower fragments of infraorbital ridges immobilized by separate wiring. Fixation not necessary for smaller fragments.

For reduction and immobilization of fractures of the maxilla with associated fractures of the zygoma or malar process, an incision is made over the ridge of the frontal bone lateral to the supraorbital rim, just above the zygomatic frontal suture line. With a periosteal elevator, the temporalis muscle is then separated from the frontal bone and a small hole is drilled through this ridge. A wire is threaded through the opening, looping over the ridge, and the two ends are passed beneath the temporal surface of the malar bone, making their exit in the upper sulcus in the region of the first or second molar. The displaced bones are elevated to their proper positions, and the wires are tied to the teeth. The long wires extending from the frontal bone to the teeth exert an upward and outward pull on the malar bone, holding it up in normal position. Should there be any question as to the adequacy of fixation, one should not hesitate to drill another hole in the malar bone just below the zygomatic-frontal suture line, and with a small loop of wire, fix the malar bone to the zygomatic process of the frontal bone.

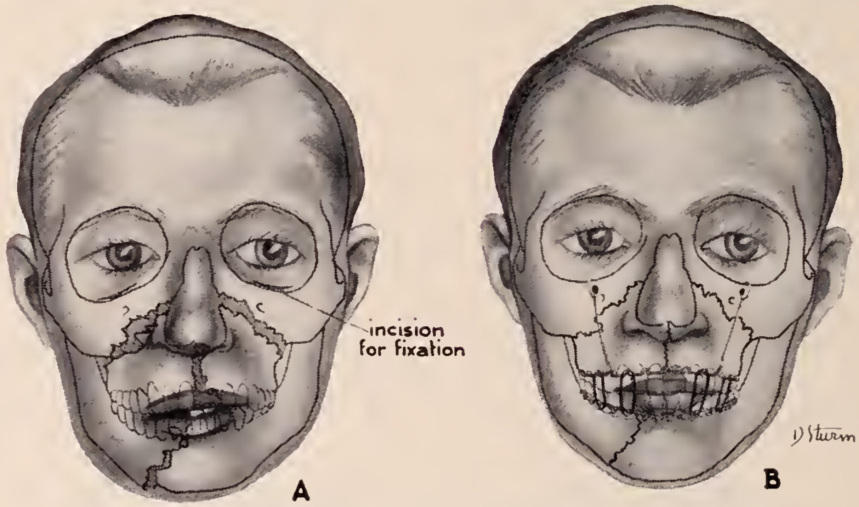


Fig. 3. A. Complete bilateral fracture of maxilla with separation in midline. Associated compound fracture of the mandible at the symphysis.
B. Metal arch bands attached to upper and lower teeth. Fractures of maxilla reduced and held in normal position with wires from infraorbital ridges to upper arch bands on both sides. Upper and lower teeth fixed in occlusion with orthodontic rubber bands.

In these cases, the malar bone and zygomatic process may be elevated by several other methods. By such methods, however, the malar bone, if completely detached, may subsequently be displaced by the strong pull of the masseter muscle. With this procedure, the bones may easily be restored to their normal positions and the malar bone firmly fixed to the frontal bone by wiring, through the one incision described above. Thereafter, the zygomatic arch does not require fixation, being held in place by the underlying temporal muscle.

Following reduction and immobilization of fractures of the maxilla and other facial bones, associated fractures of the nasal bones are reduced and maintained in position by a nasal splint, according to the routine method of treating such fractures when encountered alone.

In bilateral fractures of the facial bones, the foregoing procedures are carried out, as indicated, on both sides. In bilateral horizontal fractures of the maxilla with separation in the midline, the two halves are drawn together and immobilized with arch bands or wires. This should precede open reduction and fixation of the maxilla to the upper unfractured bones. If the mandible is not fractured, fixation of the upper to the lower jaw is unnecessary.

In all fractures of the mandible, after reduction and immobilization of the fractures of the upper jaw, the lower and upper teeth are fixed in occlusion by wires or rubber bands. When a general anesthetic is used, fixation should not be undertaken until the patient has recovered from the anesthetic.

ORAL HYGIENE. This is of the utmost importance. The mouth should be thoroughly irrigated every hour until the infectious stage has passed, and thereafter three or four times daily. Normal saline, boric acid, or any mild antiseptic solution may be used for the irrigations, though ordinary tap water suffices. Sterile solutions are neither practical nor necessary. Unless quite sick, the patient may himself carry out the procedure. The equipment consists merely of a large douche can or intravenous flask and three feet of rubber tubing to which a hard rubber or metal irrigating tip is attached. The can is placed at least two feet above the patient's head, so the stream will have ample force to insure adequate cleansing. In addition to this measure, the patient should be encouraged to brush his teeth with a small brush when possible.

The wires are allowed to remain in place for three to nine weeks, depending upon the location and type of the fracture. One may feel free to leave them undisturbed as long as necessary, since they cause no discomfort, as is the case when an extraoral appliance is used.

After healing is complete, the wire is severed through a small spear-point incision over the loop and removed through the mouth, in order to avoid contamination of the soft tissues above.

Nature is kind in the treatment of these facial injuries, in that the blood supply of the tissues is abundant and healing takes place quickly. The scar over the infraorbital ridge, being horizontal, is almost invisible, while that over the supraorbital ridge is at the edge of the eyebrow and consequently is also inconspicuous.

In only one case treated by the above method has infection developed. This was a bilateral fracture of the maxilla, with fractures of both zygomas and nasal bones. Paradoxically, it was the first case in which we ever used sulfanilamide locally. The drug was placed in the wound on only one side, and this was the wound which became infected. The wires were not disturbed, as the infection subsided following incision and drainage, and treatment with hot compresses. There was no infection in the wound of the opposite side, wherein sulfanilamide was not used.

The following two cases illustrate the application of this procedure in the various types of fractures of the facial bones.

Case I. T. S., colored, male, had been struck in the face by a train one hour before his admission to the hospital. In addition to multiple small lacerations about the face, he had a complete laceration of the upper lip in the midline, and a traumatic cleft extending through the alveolar ridge, the hard palate and the nasal cavity, into the left antrum. The lower lip and tissues over the mandible were also completely lacerated in the midline, and the symphysis was widely separated. The two upper central incisors and the left lateral incisor were loose, and the lower central incisors had been knocked out. There was also a fracture of the zygomatic process on the right.

Roentgenograms revealed a greenstick fracture of the right maxilla without gross displacement; complete displacement of the right malar bone downward and inward, with a fracture of the right zygomatic arch; a complete fracture of the left maxilla, the bone being attached only to the soft tissues; detachment of the nasal bones from the frontal process, with displacement to the right and downward; a crushing fracture of both infraorbital ridges downward; a midline fracture of the alveolar process extending into the hard palate, with separation of the two halves; and a fracture of the mandible through the symphysis, with wide separation.

The soft tissue wounds were repaired immediately after the patient's admission to the hospital, but because of his poor condition, no attempt was made to treat the bony injuries. He ran a low grade of temperature for a few days, during which time he was given sulfathiazole. As soon as his general and local condition permitted, arch bands were placed around the upper and lower teeth to bring together the fractures in the midline of the maxilla and mandible. The bones were then restored to their normal positions, and the fractures of the infraorbital ridges were immobilized by separate wiring of the fractured parts to the malar bones on both sides. To maintain reduction of the left maxilla, a wire was looped through the maxillary process of the malar bone, and the ends brought down and attached to the arch band about the teeth. The right malar bone was wired to the frontal bone at the suture line. Although there was some motion at the greenstick fracture of the right maxilla, the bones were not detached, and it was believed that fixation by wiring on this side was unnecessary. The teeth of the upper and lower jaws were brought into occlusion and held in place with rubber bands between the arch wires.

The patient had no postoperative complications, and the roentgenograms showed all the fractured parts in good position.

Case II. W. W., white, male, aged fifty-two years, was lying on the floor, working on the

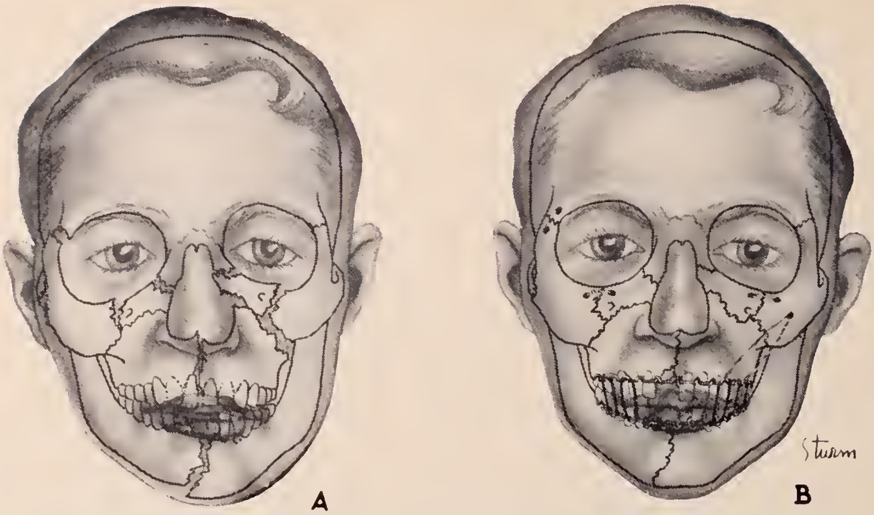


Fig. 4. (Case I)—A. Bilateral fracture of maxilla, greenstick fracture of right half and complete detachment of left half, with separation in midline. Fracture of both infraorbital ridges. Dislocation of right malar bone. Compound fracture of the mandible at the symphysis.

B. Arch bands wired to upper and lower teeth. Left half of maxilla immobilized in proper position with wires extending from body of malar bone to left teeth. Fractured parts of infraorbital ridges wired together. Right malar bone held in position by wire through frontal bone. Fixation of greenstick fracture of right maxilla unnecessary. Upper and lower teeth maintained in occlusion with orthodontic rubber bands.

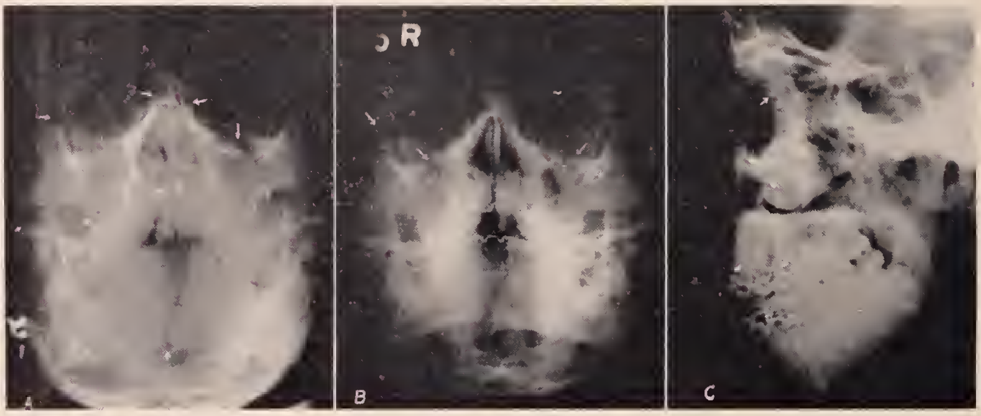


Fig. 5. (Case I)—A. Preoperative roentgenogram. Arrows designate fractures.

B and C. Roentgenograms after open reduction and fixation. Points of wiring designated by arrows.

rear axle of a car from which the wheels had been removed, when the jacks slipped and the axle fell across his face. He was admitted to the hospital four hours later, suffering acutely and in a state of mild shock. Pantopon was given, and the routine treatment for shock, including glucose intravenously, was carried out.

On inspection, all the soft tissues of the face were grossly swollen, the eyelids being almost completely closed from the swelling. The middle third of the face was elongated from displacement of the maxilla inferiorly and posteriorly, the orbital rim was elongated vertically from a downward displacement of the infraorbital ridges; there was a comminuted fracture of the nasal bones; and the malar bones were depressed. On palpation, it was apparent that all the facial bones were crushed. In addition, there was a fracture of the mandible just above the angle on the right, with anterior and lateral displacement of the posterior fragment.

Almost immediately following the emergency treatment, the patient had a severe rigor, followed by a temperature of 104 degrees, and it was felt unwise to manipulate the fractures at this time. His fever subsided under treatment with sulfanilamide, and two days later reduction and immobilization was carried out under local anesthesia.

The left malar bone was widely displaced, necessitating its separate wiring to the zygomatic process of the adjacent frontal bone. Small holes were then drilled in the frontal bone lateral to the orbital region just above the zygomatic-frontal suture line on both sides, a No. 25 stainless steel wire was threaded through the opening, and the two ends of the wire were carried downward beneath the soft tissues over the temporal bone, into the upper sulcus of the mouth in the region of the first and second molars. After elevation of the zygomatic arches and malar bone, the soft tissue wounds were closed. Eyelet wires were next placed around the upper and lower molar teeth on both sides. The maxilla was then restored to its normal position, and the wires from above were drawn taut and tied to the wires about the teeth of the lower jaw. In this manner, the teeth were held in occlusion and, at the same time, the fractured bones were maintained in proper position. The anterior wall of the antrum was elevated with a male urethral sound inserted through the nares, the nasal bones were replaced, the passages packed with vaseline gauze, and an external splint was applied.

Postoperative roentgenograms revealed the maxilla and other facial bones in good position. The displacement at the right angle of the mandible, however, was still apparent. Since it was impossible to reduce and maintain this fracture in normal position by manipulation, an incision 2 cm. long was made over the angle, and the bones were apposed and fixed with a No. 25 stainless steel wire.

During the first week, oral irrigations were carried out hourly, supplemented by the use of oral pentacresol at frequent intervals. The

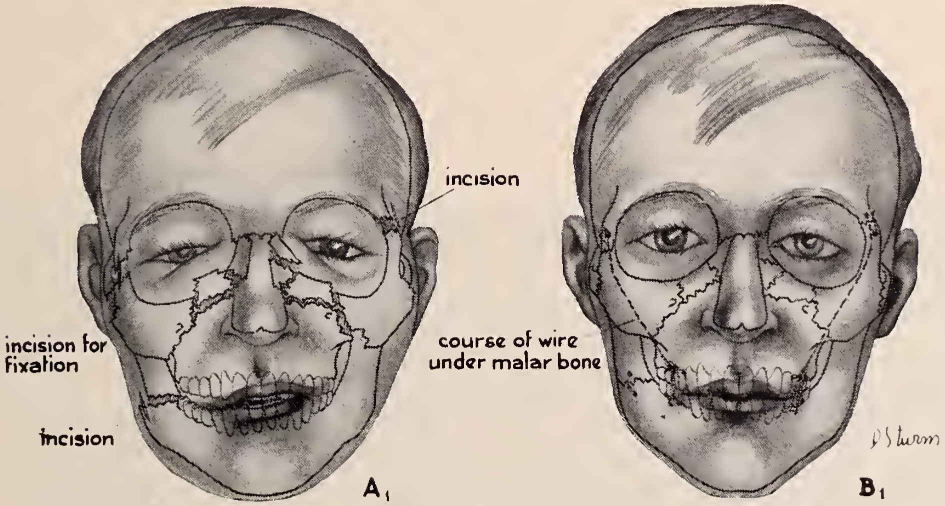


Fig. 6. (Case II)—A_1. Complete bilateral fracture of maxilla. Comminuted fracture of infraorbital ridges and nasal wings. Fracture of both malar bones. Fracture of right mandible just above angle of jaw. B_1. Fracture of right malar bone reduced and wire passed from frontal bone behind body of malar bone and attached to upper teeth, fixing the maxilla and malar bones on this side. Same procedure repeated on left, and, in addition, malar wired separately to frontal bone because of gross displacement. Fracture of right angle of mandible fixed by open reduction and wiring. Upper and lower teeth wired in occlusion.

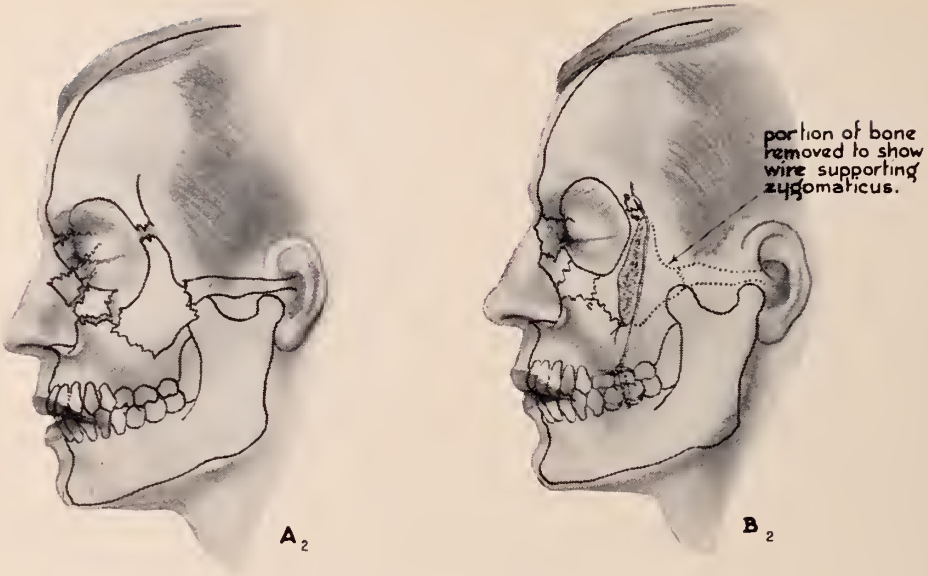

portion of bone removed to show wire supporting zygomaticus.
A 2
B 2

Fig. 7. (Case II)—A_2. Lateral view, left side, showing fractures of the facial bones.
B_2. Lateral view, showing course of wire from the frontal bone to the upper teeth, supporting the malar bone in normal outward and upward position.

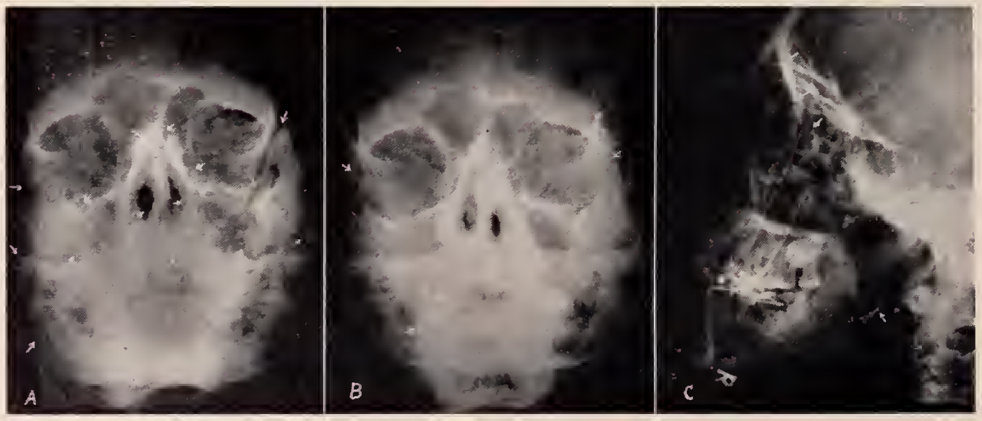
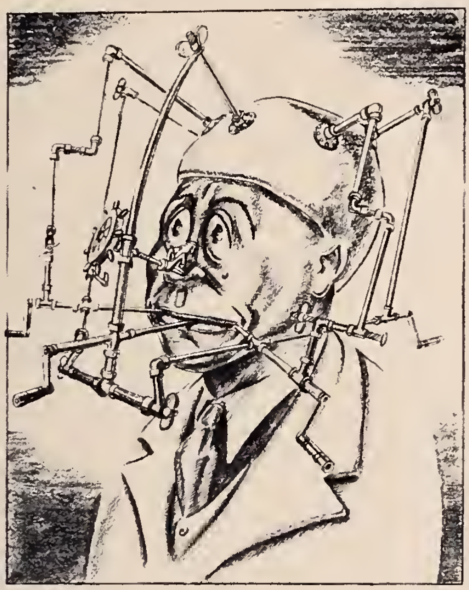


Fig. 8. (Case II)—A. Preoperative roentgenogram. Arrows designate fractures.
B and C. Roentgenograms after open reduction and fixation. Points of wiring designated by arrows.



An Artist's Conception of an Extraoral Appliance Attached to a Head Cap.

patient had a slight temperature for several days, though this gradually subsided under treatment with sulfanilamide. He improved rapidly thereafter, and was able to leave the hospital two weeks following his admission. The wires around the facial bones were removed in the office eight weeks postoperatively. Because of the fracture of the mandible, it was necessary to maintain fixation of the lower to the upper jaw for a longer period. The patient now has full motion in the lower jaw, both vertically and laterally, the teeth are in good occlusion, and the contour of the face is normal.

SUMMARY

A method of treatment of fractures of the maxilla and other facial bones by open reduction and internal wiring of the fractured parts to the unfractured bony structures is described. This method obviates the need for an extraoral appliance in all cases except those wherein open reduction is contraindicated, as in the presence of local infection. The procedure may be quickly carried out; only the most simple equipment is required; the patient is spared much discomfort; postoperative adjustments are unnecessary; and complete immobilization is maintained.

With modern baking methods, whole wheat bread has about five times the vitamin B_1 found in ordinary white bread; but methods of restoring this vitamin loss in white bread are being evolved.

Urology, Its Relation to General Medicine

THOMAS D. MOORE, M.D.
Memphis, Tennessee

Rather than dwell on some urologic entity, this discussion touches upon those points of contact between urology and general medicine and emphasizes their importance where these merge in a rather indistinct borderline of common interest. It would be easy to prove that the profession in general owes much to urologists. I have only to mention the improved technic of renal surgery, the very low mortality rate of transurethral prostatic resection, the development and refinement of the cystoscope and allied instruments, the establishment of blood chemistry on a sound basis, the discovery of renal functional tests, the rendering possible of x-ray studies of the genital and urinary tracts; in fact, there is probably no field in which methods of diagnosis have been so improved that there exists a very close approach to scientific exactness. It has not been many years since the sense of touch, so-called tactus eruditus, was the most valuable asset of the urologic surgeon. At the present date methods of visualization have been established and in modern urologic work all surgical procedures, with the possible exception of one or two, may be carried out under direct vision.

Hypertension

The recent epoch-making researches of Goldblatt and others who have demonstrated that partial interference with the arterial blood supply of one kidney would produce hypertension has created a broad and intensive field of mutual interest between general medicine and urology. The internist is keenly interested in such cases in the functional integrity and pyelographic outline of the individual kidney. When there is evidence of unilateral renal sclerosis, moderate pyelectasis, and abnormalities in the vascular supply confined to one kidney, even though there may be no subjective symptoms of renal disease on the part of the patient, numerous cases have been reported in which hypertension has disappeared following nephrectomy. The data obtained by a careful urologic survey in cases of marked hypertension afford the internist an opportunity to handle these cases more intelligently.

Pyuria

In the routine examination of a patient, practically all physicians require a urinalysis, which includes a microscopic examination of the sediment. Pyuria may be gross or microscopic, and the number of pus cells in a given specimen may depend to some extent upon the fluid intake. It may be present in a greater degree in one period of the twenty-four hours than in another. For these reasons it is important that insofar as possible a twelve, or better, a twenty-four hour specimen be examined. In the investigation of a pyuria in the male it is important to follow certain methods in the collection of individual specimens. In the two-glass test, if the second specimen is free of pus, it is fairly conclusive evidence that the source of the pyuria is not in the upper urinary tract. In our practice the three-glass test is preferred, the third specimen being collected following prostatic massage. If the third specimen contains pus and the second is clear, prostatitis may be assumed to exist. In the female the discovery of pus in a voided specimen is not considered of any importance unless it persists in a catheterized specimen. It has long been known that a few leukocytes in the urine may be present under normal conditions and the question arises as to what constitutes a pyuria. In reply to this question an authority on laboratory work made the following statement: "Polymorphonuclear leukocytes are as a general rule evidence of inflammation. A few polys are to be regarded with suspicion and the cause determined. A few mononuclear leukocytes can be considered normal. Clumped leukocytes are always an evidence of pus microscopically." Loose methods in reporting microscopic amounts of pus are to be condemned and a code has been adopted by which pus and blood cells are reported: when the number of pus cells averages less than 20 per high power field, it is graded one and the average number of cells in three fields stated; 20 to 50 cells per field constitute a grade two pyuria; 50 to 100 cells a grade three, and over 100 grade four. The specimen is first centrifuged for three minutes and the sediment spread on a slide to cover approximately four square centimeters. When an average of five to ten pus cells per high power field are found, it may be said that a pyuria exists. The urinary sediment is stained by Gram's method, cultures are obtained, and the type of infection is thus identified.

HEMATURIA

In patients presenting the symptom of bloody urine, it should always be ascertained as to whether the appearance of blood is initial, terminal, or total. Very often this will give a clue as to its source in the urinary tract. The appearance of blood from the urethra, at times other than during micturition, indicates its source to be anterior to the external vesical sphincter. Recently, a patient —a man of 44 years of age—was seen presenting this symptom and the spotting of blood he had noticed was found to be due to an epithelioma of the urethra involving the terminal 2 cm. In instances of hematuria of an intermittent type, it is very desirable that the examination be made during the appearance of blood as its source can be more exactly determined and the examination is greatly facilitated. The constant appearance of blood over a long period is usually of much different significance from the intermittent appearance of blood over a like period. The former is prone to be bleeding from a small focus in the kidney and is usually found to be of the so-called essential type. On the other hand, intermittent hematuria with varying intervals of relief is characteristic of hematuria arising from malignancy. The discovery of blood cells in the urine microscopically is frequently as important as a gross hematuria, and again a standard method of reporting blood cells should be insisted upon. As compared with pus, blood cells are of more importance than a like number of pus cells. From one to eight cells per high power field is reported as grade one and the number of cells given; 8 to 20 cells, grade two; 20 to 50 cells, grade three; over 50, grade four. Hematuria may be likened to the red light or red flag on a railroad track, and it is just as inexcusable to overlook it as a danger signal. Hardly a week passes that we do not see the dire results of neglecting to investigate the initial appearance of blood in the urine. Not so long ago an old gentleman was examined because of hematuria. He stated that for six months he had tried many and various remedies to stop the bleeding, evidently regarding it as a disease rather than a symptom. Examination revealed that the patient had an advanced carcinoma of the bladder, hopelessly inoperable. In a high percentage of cases the painless appearance of blood in the urine is the first sign of a malignancy. It would probably be a blessing to patients suffering from such disease if agonizing pain accompanied the appearance of blood. Pain is an impelling force in bringing patients for investigation when all other symptoms are likely to be disregarded.

NYCTURIA

When frequency of urination is given as a symptom, the inquiry should always be made as to whether the symptom is diurnal or nocturnal, or both. As a general rule patients with urinary frequency, who can sleep all night without annoyance, have no organic cause for the trouble. This is a characteristic feature of the bladder neuroses. On the other hand, under certain conditions, frequency of urination can be largely nocturnal. For example, in certain types of chronic nephritis, large amounts of urine will be passed during the night with a limited output during the day. This is more properly termed nocturia, and the frequency of urination associated with inflammatory conditions with the passage of small amounts at frequent intervals during the night should be designated as nycturia.

PAIN

Patients presenting themselves with pain in the lateral abdomen, loin, or posteriorly in the so-called renal areas, or obscure pain referred to the hip and thigh, or an unexplained back ache, should be considered as proper subjects for urologic investigation. Pain originating in the kidney or ureter is likely to be misinterpreted as arising in some abdominal viscus and an erroneous diagnosis made, sometimes with needless surgical treatment. Particularly is this true when pain is on the right side as attention may be directed to the appendix or gallbladder. The pain experienced from renal distention or ureteral colic is usually very severe. It is most often rather abrupt in onset and its location points to its urinary origin. This should be contrasted with the usual gradual onset of pain in appendicitis, which is not so likely to be of a severe type. In an acute attack of renal colic the patient tosses about and seeks relief by changing his position frequently, by bending his body toward the affected side, or by flexing the thigh on the abdomen. This pain of hydronephrosis, though usually in the loin and posteriorly in the region of the affected kidney, may be referred anteriorly along the costal arch and, if on the right side, is easily confused with the symptoms of cholecystic disease. In recent years a great deal has been written concerning ureteral strictures and kinks, due in a large measure to the original work of Hunner. That such conditions exist there can be no question, but it is also probable that the incidence of the disease is not nearly so great as Hunner and others would lead us to believe. In the experience of some urologists ureteral strictures are of very frequent occurrence. Others find the condition rarely. There is a wide divergence of opinion as to the incidence of the disease which is due in a large measure to the manifold variations of the normal ureter as proved by serial pyelography. The so-called diagnostic bulb precipitates ureteral spasm and cannot be relied upon. The combination of serial pyelograms and dilatation of the ureter elicits valuable information and in some cases a sort of therapeutic test may be resorted to by observing the patient for a period to determine the degree of relief obtained from dilating a possible stricture. The writer believes that in instances where the data is inconclusive, conservatism should be the proper attitude rather than to subject patients to unnecessary and innumerable ureteral dilatations.

TUMORS

Abdominal tumors, especially those in the lateral abdomen, may be confusing from a diagnostic standpoint and require definite differentiation by cystoscopic means. It is not an uncommon experience to find a mass which clinically has every evidence of being a large kidney but which on investigation proves to be extrarenal. The converse is also true in which masses, which on physical examination do not seem to be of renal origin, are found to be such. Sometime ago a patient was seen who had a large firm mass in the right loin which gave every evidence on palpation of being a large tumor of the kidney. It moved with respiration, extended through and through the loin, and it would have been very easy to have made a diagnosis of renal tumor on physical examination alone. The urologic study, however, disclosed that the right kidney was normal. When the abdomen was opened the mass was found to be a large cystoid appendix. Such experiences are not uncommon and many instances could be cited illustrating the difficulties experienced in identifying abdominal tumors. It is a safe rule carefully to exclude the kidney by cystoscopic means in cases of tumor in the lateral or upper abdomen.

URINARY RETENTION

The causes of retention of urine, whether partial or complete, may be roughly divided into two types—obstructive and neuropathic. In women, the more common causes of retention of the obstruction type are urethral stricture and large cystoceles. In men, the most common cause is prostatic obstruction, and next in frequency, stricture of the urethra. The retention bladder of the neuropathic type may have its cause in the central nervous system or in the terminal nerve supply of the bladder. In cystoscopic work it is a rule to test routinely for residual urine. If there is a history of difficulty or other symptoms which would lead one to suspect residual urine, the abdomen is palpated and the suprapubic area carefully percussed; if the bladder is found distended its sudden emptying should be scrupulously avoided. The sudden release of an abnormally high urinary pressure frequently will be followed by a congestion of the kidneys, precipitating anuria and uremia. If one should unsuspectingly draw off a large amount of urine the bladder should be refilled immediately with some sterile fluid in order to reëstablish the urinary pressure. A very simple method of slowly emptying such a bladder is to pass a No. 5 or No. 6 ureteral catheter and allow the urine to escape in drops. By keeping the fluid intake slightly below the urinary output, in the course of twenty-four hours a markedly distended bladder can be completely emptied by this means. There are a number of more complicated methods employed to accomplish gradual decompression; the most simple and practical one in hospital practice is that suggested a few years ago by von Zwalenburg, which consists of placing a receptacle for the urine several feet above the level of the bed and allowing the tubing from the catheter to pass up to the receptacle into which it flows. By this means the hydrostatic pressure of the elevated column of fluid maintains the increased bladder pressure and by gradually lowering the receptacle every few hours the bladder is soon completely emptied. Such precautions are unnecessary in acute retention of short duration. In urinary retention following various operations, sometimes referred to as postoperative retention, it has been found that when the function of micturition is restored it is often not more than fifty per cent efficient. Residual urine in such cases may be present for a number of days before it is discovered and sets up a marked cystitis. It is advisable in the prevention of this complication to drain the bladder at least once daily by catheter until it is found that the residual urine has disappeared. For many years it has been thought that catheterization in such cases was the cause of cystitis. Credit is due to Curtis for pointing out the fallacy on this belief. It is readily seen that it is the use of the catheter in caring for residual urine in such cases, rather than avoiding the catheter, that prevents cystitis.

PROSTATIC OBSTRUCTION

Prostatic obstruction, whether due to benign hypertrophy, median bar, or carcinoma of the prostate, should have treatment early in the course of the disease. It is a great mistake to allow these patients to drift and experience increasing difficulty to the point of acute urinary retention or an impending uremia. Not only is it an injustice to the patient but also to the surgeon, for the problem of treatment may be a very great one. I have been asked more than once if prostatic massage would not benefit patients with benign hypertrophy of the prostate. Pathologically, the enlarged gland is made up of an increase of adenofibromatous tissue. It would be just as reasonable to suppose that massage of a fibroid tumor of the uterus would diminish its size, or massage of an adenoma of the breast would assist in its disappearance. Occasionally a cystic type of prostate will undergo some temporary benefit from the procedure. McCarthy has well stated: "If you putter and procrastinate with a well-established prostate it will grow and spread out in business and it will be bad business for your patient." A fairly dependable index to the necessity of surgical intervention in prostatic obstruction is the amount of residual urine. Even though the gland may be quite large, if the obstructive symptoms are not pronounced and the amount of residual urine is only one to two ounces, we have not urged a transurethral resection. In such cases, however, we have advised a test for residual urine at three- to six-month intervals, or earlier if obstructive symptoms become pronounced. In our experience fully 95 per cent of patients suffering from prostatic obstruction can be relieved by a transurethral prostatectomy. The term "transurethral prostatectomy" is used advisedly because practically the entire gland is removed by the technic we now employ, rather than a small portion of the obstructing tissue as was formerly done, as in many of these cases the relief proved to be shortlived. In instances of enormous hypertrophy it is physically possible to remove the obstruction transurethrally but it has sometimes required two or three sittings to accomplish a good result whereas a clean primary enucleation through a suprapubic incision spares the patient multiple operations and no doubt incurs less risk and a shorter period of convalescence. For example, recently in eight consecutive cases of this type, clean primary healing occurred in all of them; three were dismissed with normal bladder function and a well healed scar on the twelfth day, one on the thirteenth day, and four on the fourteenth day. There was no mortality and the functional results were all that could be desired. There is hardly a doubt that if these patients with enormously hypertrophied glands had been subjected to transurethral resections requiring two or more sittings, their period of hospitalization would have been prolonged one to two weeks, not to mention the increased hazard of the multiple operations. Such cases comprise only about 5 per cent of patients presenting themselves for treatment of this trouble.

THE PROSTATE AS A FOCUS OF INFECTION

For many years it has been generally believed that chronic prostatitis is due either to the gonococcus or is an aftermath following an initial infection by this organism. However, researches in recent years, notably the work of von Lackum and his co-workers, have demonstrated that chronic prostatitis is more often nongonorrheal in origin. He estimates from a careful study of a large number of patients with definite infection of the prostate gland that 60 per cent of the cases are nongonorrheal in origin. Cultural studies have disclosed that the streptococcus viridans is harbored in the prostate, in much the same way as in dental infection, chronically diseased tonsils, and paranasal sinuses. Other organisms found are staphylococci, B. coli, hemolytic streptococci, and micrococcus catarrhalis. Bacteria recovered from the prostate in patients with diseases attributed to foci of infection, on inoculation into animals, have reproduced such diseases. In active or latent chronic non-gonorrheal prostatitis the gland may seem quite normal on digital examination. The diagnosis depends upon the finding of pus cells, or degenerated clumps of leukocytes, in the expressed secretion, or in the third glass of urine, collected after prostatic massage. Depending upon the amount of pus found, the disease is graded on the basis of four. Suffice it to state that investigation for foci of infection in the male should always include the lower genito-urinary tract as well as a study of the dental and otolaryngological aspects of the case. It is a common experience to observe chronic muscular and arthritic pains disappear after appropriate treatment of chronically infected seminal vesicles and prostate.

In conclusion I should like to state that most of the ills encountered in urologic practice in adults are also found in children. It has been repeatedly demonstrated that the chronic pyurias and so-called remittent type of pyelitis have as their underlying cause such conditions as lithiasis, congenital malformations, especially aberrant renal blood vessels, atresia or stenosis of the ureteral orifices and congenital valve formations. When such conditions are diagnosed early before the destructive process in the kidney has advanced too far, conservative measures will often relieve the trouble and render more radical operations, such as nephrectomy, unnecessary. Very small instruments are now available which make it possible to cystoscope very young infants. In the present state of development of the urologic armamentarium and our knowledge of urology in children, it is unpardonable to treat chronic pyurias of childhood as "pyelitis" and rely entirely on the alkaline diuretics to effect a cure.

The practice of urology is no longer centered about the treatment of gonorrheal urethritis and its complications. The contacts of urology with general medicine are many and varied. The careful diagnostician and equally careful urologist can and should be of great mutual assistance which in turn will be reflected in more intelligent treatment of the patient.

A medical paper advances the theory that "man is slightly taller in the morning than he is in the evening." We have never tested this, but we have certainly noticed marked tendency to become "short" towards the end of the month.

Intraspinal Rupture of the Intervertebral Disc, the Common Cause of Low Back Pain and Sciatica

R. EUSTACE SEMMES, M.D. and FRANCIS MURPHEY, M.D.
MEMPHIS TENNESSEE

THE CAUSE OF the syndrome, low back pain and sciatica, until recently has been a mystery except for a few cases which were found to be due to such conditions as destructive lesions of the lumbar spine, malignant pelvic tumors, cauda equina tumors and spondylolisthesis. We know now, however, that between 85 and 90 per cent of the patients with these symptoms have a rupture of either the fourth or fifth lumbar intervertebral disc.

It is a surprisingly common lesion. Since 1937 we have seen about 600 patients with such complaints and have operated upon about 300. It may be said, therefore, that it is certainly one of the most frequent conditions which affect the nervous system. We have learned also that ruptures of the disc in the cervical spine may cause cricks in the neck and pain down the arm and in the shoulder and in the precordium, sometimes actually being mistaken for coronary occlusion. Herniations of the disc in the thoracic spine may cause intercostal pain.

Rupture of the intervertebral disc usually is caused by a definite injury or strain to the back, although in perhaps one-fourth of the patients, no history of such an injury or strain can be obtained.

When the fourth or fifth lumbar disc ruptures low back pain, either sudden or gradually increasing, occurs usually as the first symptom; to be followed sooner or later by pain radiating down the course of the sciatic nerve to the lateral aspect of the ankle or to the heel. Occasionally pain occurs in the lower quadrant of the abdomen, the groin and the scrotum and is frequently mistaken for either abdominal or urogenital diseases. Hypesthesias occur on the lateral aspect of the leg and occasionally one finds actual anesthesia. Rarely, one sees a unilateral foot drop or a complete cauda equina lesion.

The pain in the back and down the leg or in the groin is usually made worse by bending, lifting, sneezing or coughing and in some cases by making any movement of the body.

The most common of all signs of this condition is pain in the hip and back on straight leg raising. There is also muscle spasm in the back and a scoliosis of the lumbar spine with the convexity towards the side of the lesion. Hypesthesia to ice between the knee and the heel on the lateral aspect of the leg likewise may be found in a majority of the cases. The ankle jerk is usually absent or markedly diminished when the fifth lumbar disc is ruptured, but when the fourth lumbar disc is involved, the ankle jerk is ordinarily normal or only slightly reduced. Tenderness over the sacro-iliac region and along the course of the sciatic nerve is a common finding. Jugular compression (the Naffziger test) reproduces the pain in about 70 per cent of the cases. Rarely, one may see atrophy of the calf muscles, a foot drop or paralysis and anesthesia of the lower legs and sphincters.

X-ray may show a scoliosis of the lumbar spine and, on lateral view, a loss of the lumbar lordosis. Spinal fluid examination generally reveals an increase in the total protein but may be normal.

Metastatic malignancies and other destructive lesions of the spine, pelvic malignancies, spondylolistheses, cauda equina tumors and injuries to the sciatic nerve all may produce this syndrome and should be ruled out in every case. Because of the pain in the lower abdomen and groin, this condition may be mistaken for appendicitis or ureteral colic. Ruptured disc can be and has been mistaken for both of these.

Before the entity of ruptured intervertebral disc was known, low back pain and sciatica was attributed to foci infection, vitamin deficiency, sacro-iliac strain, sciatic neuritis, arthritis and many other diseases. We now must revise our ideas concerning all of these. It is our firm belief that the theory of foci infection as a cause of radiating pain must be delegated forever to the junk heap as an example of the credulity of the medical profession and the general public as well. There is no evidence that vitamin deficiency of any type has ever caused a unilateral radiating pain. Neither has there ever been any proof that sacro-iliac strain could produce this syndrome. The loose use of the term neuritis is strongly to be condemned. Sciatic neuritis as a cause of these symptoms, except that which follows a definite trauma to the nerve, never has had any pathologic basis. Finally, we even have come to doubt that hypertrophic arthritis might cause this syndrome. It is possible that a spur which compresses the nerve root before it emerges from the intervertebral foramen may produce such symptoms, but it must be an extermely rare thing, for we never have encountered it in all of the operations that we have done for low back pain and sciatica. Certainly there is no conceivable way in which lipping along the anterior edge of the vertebral column could produce such pain.

Nearly four years ago we reported that contrast media, namely, lipiodol, air and thorotrast, was no longer needed to make a diagnosis of this condition. As a matter of fact, by clinical means one is able to make a higher percentage of correct diagnoses than with the use of these substances.

It is a well-known fact that the vast majority of people with ruptured disc may recover without operation. It is our opinion, therefore, that if a patient presents himself with a history of pain of only a short duration, rest in bed or conservative orthopedic treatment should be instituted and actual removal of the disc by operation should be reserved for those individuals who are and have been incapacitated for some time by the pain of this lesion.

The operation itself carries practically no danger, there being no mortality in our series. By removal of a small amount of bone and sometimes no bone at all, the ruptured disc can be removed, the length of the patient's stay in the hospital reduced and the possibility of weakening his back obviated. The results of the operation are very gratifying. Approximately 85 per cent of the patients get complete relief from symptoms. Others may have some persistent posttraumatic operative neuritis. Approximately 6 to 8 per cent of the patients get a recurrence of symptoms due to protrusion of more of the intervertebral disc, but these recurrences now are being reduced by a more complete removal of all of the nucleus of the disc.

In conclusion, therefore, it may be said that rupture of the intervertebral disc is by far the most common cause of the syndrome, low back pain and sciatica. The diagnosis of this condition can be made more accurately by clinical means than by contrast media. Conservative treatment should be instituted unless the patient has a history of recurrent attacks and is disabled by them. The operation is highly satisfactory and the danger relatively slight. There can be no further justification for the diagnosis and such conditions as foci infection, vitamin deficiency, sacro-iliac disease and sciatic neuritis as a cause of low back pain and sciatica.

All over our land there have been many cases of 'colds,' not the like of the holocaustic influenza of earlier years but enough to handicap in a large manner. Staying in bed, resting and other suitable remedial measures are generally sufficient.

Carbuncles*

ERNEST C. KELLY, M.D.
From the Department of Surgery of the University of Tennessee, Memphis.
MEMPHIS, TENN.

I HAVE SELECTED a topic that can and will be covered briefly, as well as a subject that concerns every branch of the healing art. Many doctors practice a lifetime without resecting a stomach or reconstructing a common duct, but few men practice long without being called upon to administer to some unfortunate individual with a carbuncle. Yet I find that medical students, interns and practitioners alike are very much more interested in, and usually better posted on, the mechanics of a more spectacular operation than in the care of a carbuncle.

My attention was first called to the fact that carbuncles are lesions of major surgical importance in 1935 when during one week we had three cases complicating diabetes that were treated surgically, two excised and one incised with an undermining of the flaps, in which there was a mortality of 100 per cent.

It shall not be my purpose here to discuss the etiology, pathology or diagnosis of carbuncles because all are well known and offer no difficulty.

What I do hope is that we as a profession may arrive at a little more unanimity in our plan of treatment. It has been said, and I think with some truth, that when two men of equal ability take opposite views on a therapeutic measure, neither is correct. Again, any disease for which there is a great number of therapeutic measures, the treatment has not been satisfactory. A quick review of the literature on the treatment of carbuncles gives us just such complicating and opposite views. For instance, Dr. Russell M. Wilder, Professor of Medicine, University of Minnesota, and one of our guest speakers at the Mid-South Postgraduate Medical Assembly, in *discussing management of diabetic patients*, says, "Carbuncles are a deadly complication in diabetes. The mortality is reported as being from 25 to 60 per cent."

He adds that the most important prophylactic measure is the admonition of Price on the subject of pimples and boils, "Don't squeeze, don't prick, don't cut." On the treatment he says, "The wide crucial incision of a carbuncle, extending through the zone of induration seems a particularly bad form of treatment. It must lead to extension of the infection and septicemia in many cases. He says roentgen rays may hasten localization and lessen pain."

His plan of treatment is as follows:

1. Absolute rest in bed.
2. Rigid control of glycogen.
3. Hot packs of equal parts of boric acid and 50% alcohol.
4. Daily intravenous injections of 10 cc. of a 40% solution of methenamin for 7 days.
5. After central necrosis and natural drainage has established itself and not until then, a pair of sterile artery forceps are introduced and gently opened.

Dr. Frederick Stratton, Professon of Surgery and Director of the Department of Surgery, Marquette University, School of Medicine, takes an entirely different view and says: "While conservative measures are advisable in the treatment of the average boil, carbuncles, on account of the anatomical factors concerned, require quite early and radical treatment in order to establish proper drainage and prevent sloughing. The most generally accepted methods of treatment are:

1. The use of wide crucial incisions extending well into the zone of induration, undermining the flaps so as to open freely the many channels formed by necrotic fat; gauze is lightly packed under the flaps; after sloughing, the flaps are allowed to fall in place.
2. Use of parallel incisions (Currie) extending beyond the zone of inflammation and down to the fascia; the skin strips

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*Read before the seventy-ninth semi-annual session of the Clarksdale and Six Counties Medical Society, November 12, 1941, by Dr. J. D. Biles, of Memphis, Tennessee.

are undercut and packed with gauze.

Dr. John Hosford, F.R.C.S., writing in the British Medical Journal, Feb. 19, 1938, says "A great variety of treatments have been employed for carbuncles, but the general tendency in recent years has been towards conservation." His plan of treatment is as follows:

1. General—Rest, fluids, food, opiates in sufficient quantity to relieve pain and produce sleep.
2. Local—Hot packs soaked in a 12% solution of sodium sulphate, changed every two hours.
3. Where available the short wave diathermy is of great value.

Under this plan of treatment nearly all carbuncles will remain local; pus and slough will be discharged and healing will be as quick, if not quicker, than if an incision had been made, and the scar much less.

4. In "spreading carbuncles" Dr. Hosford says it may be necessary to excise the carbuncle completely or inject 55 cc. of citrated blood at one inch intervals until the indurated area is surrounded. He recommends that the latter be tried first.

In case the carbuncle is complicated by diabetes, however, he recommends early complete excision due to the grave prognosis and the patient's poor power of resisting infection.

Drs. Cole and Elman, professors of surgery at the University of Illinois and Washington University, respectively, in their recently published textbook have this to say about the treatment of carbuncles: "X-ray therapy when used early may hasten suppuration or may even abort the process. After the carbuncle is well established the treatment consists of providing adequate drainage by incision, preferably cruciate through the tough derma into the subcutaneous abscess; or if the skin is necrotic, excision of the entire carbuncle mass."

J. K. Berman, Assistant Professor of Surgery, University of Indiana, studied 125 cases of severe carbuncles and a similar number of smaller ones in an effort to arrive at the proper method of treatment. In the smaller cases the only surgery that was done consisted in connecting the sinuses and removing the slough. There were no deaths, no complications in this group. In four cases, Dr. Berman excised one-half of a large carbuncle and incised and undermined the other half. In each case the incised half healed in a much shorter time and left less scarring. His conclusions as to treatment after his study are as follows:

1. Carbuncle on the face is a most serious lesion, resulting in a 40% mortality and must be treated conservatively.
2. Carbuncles elsewhere on the body associated with debilitating disease should be treated by surgical intervention, incision with undercutting of flaps being the operation of choice.

Dr. Charles D. King, of Birmingham, in the Southern Medical Journal, October 1938, says 65 to 70 per cent of all carbuncles will respond to roentgen therapy.

It is obvious from the above cross-section of the literature that there is no unanimity of opinion as to the treatment of carbuncles, especially those cases complicated by debilitating diseases.

Certainly I have nothing new to add to the many plans of treatments that have been suggested. The treatment of choice in all types of carbuncles is the treatment that is most rapid in producing a cure, has the lowest mortality, gives the least discomfort during treatment and results in the smallest amount of scarring. With this in mind, I have treated thirty-eight carbuncles during the past three years, using the following plan without a single death and with no complications:

1. No carbuncle is considered a surgery emergency.
2. If diabetes is found to be complicating the carbuncle, the aid of a competent internist is sought to control the diabetes.
3. Opiates in sufficient quantity to control pain and produce rest are given.
4. X-ray therapy supplemented by hot boric acid packs is used routinely and if pain is lessened and toxemia reduced, no other treatment is indicated.
5. If pain is not relieved and the toxemia increases, then a cruciate incision is made and the flaps undermined and lightly packed with gauze and the hot boric packs continued.
6. Under no circumstances have carbuncles about the face been treated with more surgery than is necessary to lift out a piece of sloughing tissue.
7. I feel that there are few if any indications for excision of carbuncles.

The Present Status of Wound Treatment*

V. B. PHILPOT, M.D.
HOUSTON, MISSISSIPPI

THE PURPOSE OF this paper is to emphasize a few well-known features in the treatment of wounds in general as we see them in a community hospital of one of our small town districts. Even in the rural sections of this machine age we encounter various types of wounds almost daily.

The symptoms of wounds are familiar to every medical man, the principal ones being pain, shock, loss of function, hemorrhage, and the physical appearance of the wound itself.

The cause of wounds is trauma, either direct or indirect, and it is very rare that any instrument causing a wound other than the surgeon's knife is sterile. The wounds we most frequently see are those from automobile and railroad accidents, sawmill and other industrial plant accidents, gunshot wounds, farm wounds, and knife wounds. They may range from slight abrasions of the skin to those of a most severe nature.

The first and most important consideration in the treatment of all wounds is hemorrhage and shock. Primary hemorrhage may be insignificant or an immediate cause of death, depending on the size of the vessel or vessels injured. It is well to bear in mind the color of the blood in profuse hemorrhage, as well as the character of the flow, in order to distinguish between arterial and venous bleeding. It is also well to remember the strong probability of an artery and its accompanying vein both being injured at the same time. The first aid treatment of hemorrhage is usually given by some layman or the family physician immediately following the injury, and consists of temporary stoppage of the bleeding by compresses and tourniquets made of anything convenient.

A tourniquet applied too long may endanger both life and limb due to the occlusion of both arterial and venous circulation, and sudden interruption to all trophic stimuli, and a starvation of the tissue below the tourniquet. Compresses immediately above the wound in case of an artery, below the wound in case of a vein, or in some instances directly in the wound, is a safer procedure than a tourniquet, but more difficult to retain in position during transportation to a hospital. Occasionally it is necessary to close the wound by temporary sutures to arrest hemorrhage. Spontaneous arrest of hemorrhage sometimes occurs, and such an arrested hemorrhage must be carefully watched until permanent relief is available.

My experience in dealing with wounds incurred in rural sections leads me to suspect that the treatment of shock has not been given sufficient emphasis. The majority of such patients I see have been brought to the hospital in the back seat of a car, on a truck or in some other vehicle in a very uncomfortable position. Regardless of the extent of the injury, the weather, or what-not, it seems to be uppermost in the minds of all lay people and some doctors that these patients must be rushed to a hospital immediately, and then we surgeons who receive them are likewise too anxious to clean up the wound or get rid of a mangled limb. Such procedures add additional shock to a wounded person, already in a bad condition, and in my opinion, are responsible for more deaths in postoperative wounded patients than all other causes combined. Therefore, one must first treat the shock, which is secondary to and coincident with stopping hemorrhage.

Perhaps the best definition of shock is that given by Crile who says, "shock is the depression of the vital powers arising from an overstimulation of the nerve centers followed by an exhaustion of inhibition of the vasomotor mechanism," all of which may be brought about by trauma, with violent impressions on the sensory nerve fibers, conveyed to the nerve centers. The first principle, then, in the treatment of shock is complete rest for the patient, especially the part affected. Administer morphine in sufficient quantities to relieve the patient of pain, thus preventing further shock.

Strychnine has been and is considered a

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*Read before the Six Counties Medical Society, April 3, 1940.

good stimulant. It stimulates the central nervous system, in fact, the entire system. According to Crile's definition of shock there is already an over-stimulation of the nerve centers, so it stands to reason that further stimulation of these centers by strychnine is just what we do not want. "It goads the heart to increased action when that organ has not sufficient blood passing into it to contract firmly and strongly." This additional shock caused by strychnine has been described as the "whip to the dying horse to make it pull." It is well to remember that strychnine and similar drugs should not be given to a wounded patient. Camphorated oil was used during the war as a powerful stimulant. I have had very little experience with it. Atropine, next to morphine, is one of the best drugs in the treatment of shock. Atropine is considered by Hare as a "sedative to the vagus; it acts upon the vasomotor system, combats the dilation of the blood vessels, and maintains vascular tone, opposes stagnation of blood in any vessel, and increases the amount of moving blood." It is especially valuable when the skin is very moist. It is probably better to give morphine and atropine in combination. In my opinion, these drugs are usually the only hypodermics necessary to administer. A cup of hot coffee, when the patient can retain it, is worth while. Hot liquids should be given by rectum, and it is very important that heat be applied to the body. In profound shock it may become necessary to bandage the limbs tightly. We usually do this by applying a layer of absorbent cotton over the limb, over which light bandages are applied, producing even pressure the full length of each limb. This has a tendency to inhibit the peripheral circulation and to keep the blood in the deeper organs where needed. Such treatments can be given anywhere.

The administration of tetanus antitoxin should be forgotten, or better still, combined tetanus and gas bacillus antitoxin.

After the above treatment is carried out, the patient then should be taken to the hospital, if hospitalization is necessary, when he has fairly well reacted from the shock of the injury. Intravenous solutions of saline, and glucose, and where there is an excessive loss of blood, blood transfusions may be given before surgical interference. In other words, get the patient in the best possible condition and we can then proceed with such operative procedures as are necessary, depending on the nature and extent of the wound.

In most wounds local or block anesthesia can be and should be used, because it is the safest and tends to prevent further shock to a patient already depressed.

In the treatment of the wound itself there are a number of methods recommended especially regarding the antiseptic used. We all have our hobbies in this respect. A few years ago, Morehead, who in all probability had one of the largest traumatic surgical practices in the country, used iodine as the antiseptic of choice. When using iodine it is best to dry-shave and cleanse the skin with benzine, followed by the application of a 5 per cent tincture. Soap and water is, indeed a splendid cleansing agent, but iodine penetrates more readily when applied on a dry surface. I appreciate the fact that there is considerable opposition by some good men to the use of iodine. Some feel that while iodine is a good antiseptic, it also injures the vitality of the tissue and therefore does about as much harm as good. It must be remembered that in the treatment of all wounds no antiseptic really sterilizes the wound, and this is especially true in lacerated or jagged wounds.

After cleansing the skin as thoroughly as possible with soap and water, the next step is the careful excision of all traumatized tissue. Débridement of wounds apparently was first suggested by Larrey, in 1914, during the Peninsula Campaign. One hundred and one years later Gray, of the British Army, and LeMaitre with the French, began doing more radical débridement around the channel of the wound, in addition to removing any foreign bodies. The technic of débridement should consist of a thorough excision of all traumatized skin, fat, fascia, and muscle, including a thorough search for concealed tracts, and the removal of all foreign bodies. The dissection should be done with very sharp and smooth instruments, and the operator should bear in mind the importance of preserving uninjured the nerves and blood vessels, most of which lie immediately beneath the fascia. Even retraction should be made so as to expose all bleeding vessels, which should be ligated or repaired well above any trauma or injury to the vessels. Bleeding vessels should be tied with the smallest catgut necessary to hold them. (For small ones we use No. 00 plain catgut, and chromicized for the larger.) Catgut is supposed to be sterile, and is as a rule, but it is advisable to leave as little excess foreign material in the wound as possible.

After a thorough mechanical cleansing of the wound and ligation of all blood vessels, the area should be flooded with ether and irrigated thoroughly with saline solution as a further cleansing procedure, after which a clean set of instruments and gloves are put in use and all tendons and fascia sutured carefully, with fine chromic catgut. All dead space is obliterated. The skin is brought together with dermal or very fine silkworm sutures. One should avoid undue tension and see to it that the wound is dressed with even pressure.

After closure of the wound it is important that the patient be observed closely for the first forty-eight hours as some of these wounds will become infected, in which event all sutures must be removed and the usual treatment of infected wounds instituted.

Wounds that become infected following the above procedure, or that are already infected because of delayed treatment, should be left open and continuously irrigated with a mild antiseptic solution. The most popular antiseptic has been Dakin's, but others may be substituted, the main point being continuous application. The length of time this treatment should be continued varies with the case. When bacteria are no longer present it is customary to perform a closure of the wound. There is one point in the treatment of infected wounds that I strongly emphasize: Do not break down any healthy granulations as they appear. All of us have seen patients with infected wounds, as, for instance, those following the drainage of an appendiceal abscess, who have rigors as the result of opening up small capillaries and allowing an absorption of infected material into the blood stream. We must be careful not to overtreat wounds.

In this connection I wish to call to your attention the bacterial destructive agent, or bacteriophage, as described by d'Herelle, formerly of Egypt but now at Yale University. One of the most favorable reports of its use is by Albee, who found that bacteriophage occurred spontaneously in 94 per cent of cases of osteomyelitis treated by the Orr method, and who attributes the splendid results of Orr in his treatment of osyteomyelitis to the bacteriophage. In the light of these observations it is reasonable to expect definite progress in the treatment of infected wounds by bacteriophage, especially when our laboratories become more proficient in the growing and isolation of races of the phage specific for each bacterium.

In the treatment of wounds I like to emphasize a feature already mentioned, and that is blood transfusions. Where a patient has lost a great deal of blood there is no other remedy as valuable as a blood transfusion. My experience with the direct method leads me to believe that when the patient's blood is correctly matched and typed reactions are very rare. Not only is blood transfusion valuable where the patient is anemic, but it also gives excellent results in prolonged cases of infected wounds where septic symptoms have developed. In such cases small transfusions frequently administered are more efficient than larger ones less frequently given.

Finally, the patient's general condition should be considered and the necessity of employing every means possible to raise the natural health forces, such as plenty of good, nourishing food and lots of sunshine. Where sunshine is not available the quartz lamp is a good substitute and a great aid in building up the patient's general resistance. It is also advisable to remove all foci of infection, as in the treatment of any other condition.

CONCLUSIONS

1. It is necessary to treat shock coincident with hemorrhage, if there be a hemorrhage, and not to add additional shock to a patient already exhausted by rushing him to a hospital or some other permanent place of treatment in a haphazard way.

2. Thorough cleansing with soap and water is of first importance.

3. Jagged or lacerated wounds should be treated by débridement and irrigating with saline before suturing, instead of treating them only by antiseptics.

4. Blood transfusions should be given in cases where excessive loss of blood has occurred and where septic symptoms have developed in infected wounds.

5. It is important to treat the patient's general condition and do everything possible to build up natural health resources.

A Surgical Reminiscence of Forty Years Ago

JERE LAWRENCE CROOK, A.M., M.D., F.A.C.S.
JACKSON, TENNESSEE

IN THE AUTUMN of 1901 the writer attended the Tri-State Medical Association, comprised of doctors from Mississippi, Arkansas and Tennessee. and discussed the subject of appendicitis which had been presented by one of the essayists on the program. Dr. W. B. Keaton, of Scott's Hill, Tennessee, was in the audience and heard both the paper and the discussion.

In February, 1902, following that meeting one cold, snowy night I had a long distance call from Doctor Keaton from Scott's Hill in which he stated he had a patient suffering with appendicitis who had been ill nearly a week. He believed the appendix was ruptured. The patient was in a critical condition from peritonitis. He requested that I come out the next morning to Lexington and drive over to Saltillo and operate on the patient. I asked if it would be possible to bring the patient to Jackson but he said it would be absolutely impossible to move him without killing him.

He then directed me to take the early N. C. & St. L. train from Jackson due in Lexington at eight o'clock and there he suggested that I secure a double team and drive through to a point near Saltillo within three miles of the Tennessee River. He said I could get full directions from the livery stable owner in Lexington.

I accepted the call and went down to the Rochelle-Warford Sanatorium, where I did my surgical work, and borrowed the head nurse, a Miss Bernard who agreed to go with me. She and I spent quite a while in assembling instruments, sheets, towels, et cetera, that would be required.

Early the next morning I had my horse and buggy at the door and drove to the Sanatorium and picked up Miss Bernard and two suitcases filled with sheets, towels and dressings and all the instruments which I thought would be needed and which had been carefully sterilized the night before. We left Jackson at seven o'clock and reached Lexington one hour later. I immediately went to the livery stable and engaged a single buggy with two horses. The livery stable proprietor drew a little map on my prescription pad showing the route I should take to reach the patient's home near Saltillo.

The snow was on the ground and was beginning to thaw so that the roads were almost impassable. The buggy would mire up almost to the hubs and it was with great difficulty that we were able to get up the first hill leaving Lexington. In some way I misinterpreted the map and drove ten miles up the road via Scott's Hill. There I was set right and directed to take the road to Reagan and from that point I would be directed for the rest of the journey. It was ten miles from Scott's Hill to Reagan. Halfway between these two points the singletree on the buggy broke in two due to the heavy strain on it from pulling through the mud. It was necessary for me to unhitch one of the horses and leave the nurse wrapped in the laprobe sitting in the buggy while I rode bareback five miles to Scott's Hill where I secured a new singletree. I brought it back and attached it to the buggy and we continued our journey to Reagan.

When we arrived there it was almost dark and my nurse was almost frozen. I took her into a nice home opposite the one store in Reagan and the lady of the house had the nurse to go to bed, wrapped her up in blankets. gave her a stimulant, and I allowed her to rest for an hour.

I went across the road to the store. a long frame building of one story with a porch in front and steps leading down to the road. In the store I found a red-hot stove and four or five men sitting around it. I introduced myself and stated that I was on my way to Saltillo to operate on Mr. Montgomery and would like to get further directions from them as I had lost my way and had gone by Scott's Hill by mistake. I said, "I encountered some awful roads and had great difficulty in getting through at all." One of the men sitting

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*Read at the Annual Ladies Night Banquet of the Alcorn County Medical Society in Corinth. Mississippi. December 16, 1941.

around the stove, chewing tobacco vigorously, sized me up and emitted a generous mouthful of tobacco juice which struck the stove at a tangent. While the juice was still sizzling, he said, "Young fellow, you ain't seen no roads yit," and I found out later that he was more than right.

Five miles beyond Reagan my weary horses refused to budge any farther, as the buggy was mired up to the hubs in thick, sticky mud. We could not do anything but sit there and hope for someone to come along. We were about two hundred yards from a farmhouse from which light was shining from the windows. In a little while the farmer who lived there came by on horseback. Seeing my plight and learning my mission, he said, "I think I can get you out. I will go back to the house and have a negro come out and unhitch your weary beasts, and I will lend you a fresh team to carry you the rest of your journey." He certainly was a good Samaritan to me, to the nurse, and to the team and to the patient. I do not know his name and I have always wished that I had secured it.

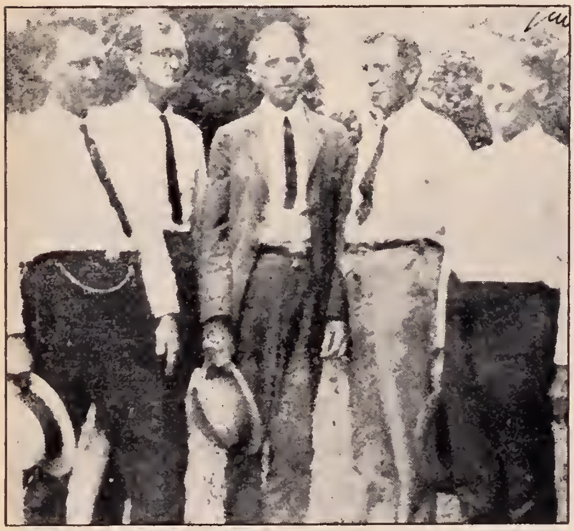
With the fresh team we drove the remaining distance of about six miles and reached the patient's home at eight o'clock, just twelve hours from the time we left Lexington. The snow had begun again en route and it was snowing when we arrived. The patient's home was a two-room log house with a lean-to for the kitchen. The room in which he lay had only one window which fortunately opened toward the east. I soon learned that the patient had been sick eight days. I found on examination that he apparently had a localized abscess; otherwise he would have been dead. There was great tenderness over the abdomen but the patient's general condition was fairly good. We, therefore, decided to wait for daylight to do the operation as the house was only supplied with coal oil lamps.

I was assigned to sleep in a nearby house about one-fourth of a mile away through the woods. I awoke at daylight the next morning and went out on the stoop and washed my face in a tin pan with water dipped from the bucket on which there was a comparatively thick layer of ice. When I reached the patient's home after breakfast I found about fifty of his neighbors and friends assembled.

No arrangements had been made for an operating table or any other equipment for the operation. Doctor Keaton had been with the patient all day and remained during the night before the operation to help me the next morning. I took several of the friends of the patient out to the barnyard and we found some planks under the corn crib covered with snow, dust and dirt. I asked the gentleman to select three planks to make a barn door. I asked some of them to do this work and other friends to scald and wash off the door after it was completed. It was simply three planks nailed together with three cross pieces, sawed off for a six-foot length. Doctor Keaton and I then got the meal barrel and the kitchen table and we placed the newly-made barn door on these supports. The patient's wife furnished me several quilts for padding on which I placed the red oilcloth that I had taken from the kitchen table. This, of course, could not be sterilized but was thoroughly cleansed with hot water and soap. On this improvised table my nurse placed the sterilized sheets which we had brought with us and she very efficiently prepared the room as well as she could for the operation.

Doctor Keaton had never assisted in an operation, but said he would watch the patient's condition while the nurse and I did the operation. A young man who had taken one year of a medical course was present and consented to give the anesthetic which was ether. Due perhaps to inexperience he gave a little too much of the anesthetic and the patient ceased breathing. His condition became so alarming that I was forced to remove my sterile gloves and use artificial respiration and make every effort possible to keep the patient from dying on the table. After his breathing became normal I then put on my gloves again to start the operation. The same thing occurred a second time while I was in the midst of the operation and the same measures were repeated to prevent the patient's death. After the second episode I was able to continue my operation and removed a sloughing, partially gangrenous appendix which was lying in a pool of pus found in a localized abscessed area which I was careful not to break down. The operation was completed, a large drainage tube inserted and the patient was turned over to the nurse for further treatment. She had meanwhile consented to remain with the patient until his condition was safe for her to leave.

When I emerged from the room with the appendix grasped by hemostatic forceps in my hand I found the adjoining room crowded with the patient's friends who had overflowed out into the yard. It was a sense of great satisfaction to me to be able to show the foul, sloughing appendix as a trophy of the operation so that in the event of the patient's death no one could question the necessity for the operation.



The patient, Mr. Montgomery, and his four brothers at the time he was operated on in February, 1902.

Doctor Keaton and I then retired to the kitchen for a conference as to the fee. He said the patient and his two brothers owned their own store and a fine farm and were able to pay a fair fee. I asked him if $250 for the operation and my detentions from home would be exorbitant, and he said it would be reasonable. I then added $5 for the hire of the team and we called in the two brothers of the patient for a conference. They said they did not have any money available at the time to pay for the operation. I then said, "Will you sign a note or due bill until you can arrange to get the money?" They agreed to do this and I took out one of my prescription blanks and wrote out the following due bill: "Ten days after date we promise to pay to the order of Dr. Jere L. Crook the sum of $255 for surgical operation and expenses for our brother." I presented this and one of the men signed it "Montgomery Brothers" which, of course, made all of them responsible for it.

There was a primitive stagecoach which made a trip daily from Saltillo to Lexington that passed by the front of the patient's home. Doctor Keaton had arranged for me to take passage in this rig for my return trip. I was the only occupant at first and I sat by the driver, a big, husky, outdoor man. As we started off from the house he asked me about the condition of the patient and I told him it was satisfactory and it looked like he had a good chance to get well. Then looking me straight in the face he said: "It is a powerful good thing he is going to get well." I replied: "Yes, I agree with you." He said, "You don't ketch my pint. He is one of the best citizens we got in this part of the country and I mean it's a powerful good thing for you that you did not kill him on the operating table." To this I made no reply but thanked my lucky stars that the chances of survival for the patient were fairly good, at least until I could get out of the country.

The third day after this eventful trip a long distance call came in from Saltillo. At that time there was only an iron or steel wire for the long distance connection and the voice coming over this wire was very difficult to distinguish or to understand; however I was able to hear the voice at the other end of the line say, "Is that you, Doctor Crook?" I said, "Yes." He replied, "Well, Doctor Crook, you will have to come back here and do your job over again on my brother. His bowels are busted open and coming through his belly. You will have to come out here and sew him up." I assured him that the condition was no more than I had expected due to the delay in operating on the patient; that the bowel near the appendix had become soft and also had sloughed, and I believed if he would keep the nurse and have the patient cared for by her every day the patient would get well and the hole in the bowel would heal up without further surgery. After I had told him this he said, "Well, you charged too much for that job. We think $150 is a plenty to pay you." To this statement I reacted somewhat differently and in place of assuming an apologetic note I said to him, "You are too late in your demand. I have already deposited your due bill in the First National Bank and have already collected the $255. I also learned from the bank at Jackson that Montgomery Brothers credit is good for $5000 or more at the bank in Lexington. I do not think you can get out of paying your note to your own bank."

This settled him and I heard no more from the patient until the nurse returned at the end of ten days, and she had a great many experiences to relate regarding her stay in the backwoods. She left the patient convalescent with the fecal fistula closed and no further trouble marring his convalescence.

Thirty-five years later I met Mr. Montgomery on the street in Jackson as we were waiting for a street-car. I simply asked his name and when he said "Montgomery" I asked him if he ever knew Mr. Montgomery who lived near Saltillo and told him my name. He said, "Doctor Crook, I am the Montgomery you operated on thirty-five years ago and I have been in perfect health ever since." Needless to say this was one of the most gratifying experiences I have ever had in my professional life.

Greetings from Dr. Speck

I want to extend my cordial greetings to the doctors of the Mid-South and to urge you to attend the fifty-seventh session of the Mid-South Postgraduate Medical Assembly on February 10, 11, 12 and 13, at the Hotel Peabody in Memphis. The Mid-South has rendered a great service. The four-day program will epitomize the latest in surgery and medicine by the outstanding authorities of this nation. It is doubtful if there is another medical association anywhere that offers so much in so short a time. Each lecture is planned to summarize the latest and best known in a certain field of medicine. The round-table discussions at the noonday luncheons offer a fine opportunity for the men to come in direct contact with essayists and to ask them questions which might aid them with personal cases at this time.

The commercial and the scientific exhibits at the Mid-South will be of great educational value. The commercial exhibitors in addition to bringing splendid information are a big factor in financing the association, and certainly the scientific exhibits furnish the very best means of medical instruction.

The fellowship is the very best to be found anywhere. All the doctors have a fine opportunity to swap ideas, to converse freely one with the other about their medical cases and medical problems.

The doctors of Memphis are fine entertainers, cordial and friendly. They never leave anything undone to make our visit pleasant and profitable, and Hotel Peabody is expert in supplying every comfort.

The program this year is unusually good. Dr. A. F. Cooper is an experienced hand with program administration.

I want to extend a special invitation to every past-president of the association to attend the meeting and to be my guest at the banquet on Wednesday evening at six o'clock, February 11.

Please let every one feel free to call on me at any time during the meeting if I can be of service.

Clyde M. Speck, Whitfield, Miss., President of the Mid-South Postgraduate Medical Assembly.

The Mississippi Doctor

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MORTALITY IN APPENDICITIS

It is very interesting to note the *Reader's Digest* for February, 1942, which contains an article on page 45 "Mortality, Zero: The Goal Now in Appendicitis" by Paul de Kruif, in which he states the following:

"Every minute of every day sees an operation for acute appendicitis; there are over 520,000 yearly. And every year some 25,000 of the victims die. Despite educational campaigns urging persons with abdominal pains not to take cathartics but to see a doctor, the appendicitis death rate has not been lowered much since 1910.

"Suddenly, however, the outlook has changed. This year a new way of using that wonder-worker, sulfanilamide, comes to aid the surgeon's knife. So potent is this weapon, and so cheap and simple, that only unheeding complacency of the public and the medical profession alike can prevent appendicitis deaths from falling by at least one half this year and becoming negligible in our mortality figures within five years. . . .

"The first systematic use of sulfanilamide against appendicitis was reported from Philadelphia. Dr. Isidor Ravdin and his fellow surgeons at the University of Pennsylvania Hospital faced the fact that in nearly 40 per cent of their acute cases the appendix had already ruptured. . . .

"Then, in September 1940, in the excellent but not widely known medical journal, *Mississippi Doctor*, appeared news of a far simpler way to give the magic. Dr. J. Gordon Dees of the University of Tennessee described it: You simply sprinkled a snow of powdered sulfanilamide into that terrible abdominal battlefield where life had only a one-in-four chance against savagely spreading microbic death. Out of 25 peritonitis victims so treated, reported Dr. Dees, only one died.

"Mightn't this be a happenstance, one of those 'interesting observations' that come to nothing? What you needed were hundreds of cases, reported in the big league medical journals.

"And it happened! On January 10, 1940, Dr. R. Stirling Mueller of Roosevelt Hospital in New York stood looking in dismay into the just opened abdomen of a man with a ruptured appendix, a man marked for death. Over his shoulder peered another surgeon, Dr. William H. Cassebaum. Neither knew anything about Dr. Dees and his still unpublished experiments. But they thought suddenly, desperately, of pouring a little sulfanilamide into the man's abdomen. It seemed silly, hopeless, but it could do no harm. He was done for anyway, they thought. . . .

"That man was the first of 204 victims of acute, suppurative appendicitis who came to the Roosevelt Hospital as emergencies in 1940. All were operated to remove the appendix. Among them were 59 who had already developed peritonitis. To the knife's mercy, for these, was added the magic of that white powder. And of all the 204 not one died. . . .

"These official, astounding figures were published in 1941 by Drs. J. E. Thompson, J. A. Barbson and J. M. Walker—with due credit to Mueller and Cassebaum for their wild idea. .

"But as the months of 1941 went on they could report 331 successive cases of acute appendicitis—all red hot, all emergency, all operated upon. Without death."

It is very interesting to note that the *Mississippi Doctor* is quoted in this rather timely article, quoting the September, 1940, issue in which Dr. Dees, who is now in the Medical Corps of the United States Army as a major, stationed at the Jackson Air Base in charge of the surgical department, first reported his group of cases in which we both have been very much interested. This article was accompanied by an editorial and followed by another reported both by him and myself.

Mississippi feels very proud of Major Dees in spreading this news to the medical profession. He and I feel as though we have pioneered in this work. Neither of us has had a case of peritonitis from any cause to die in many, many months.

The most perplexing problem that has confronted us was reported to the Mississippi Chapter of the American College of Surgeons in January, 1941, concerning the full-term pregnancy with a ruptured appendix and general peritonitis, which delivered the baby postoperatively and left the hospital eight days after the operation was performed, and is still well and happy, but having lost the baby.

We do not drain any of these cases of peritonitis early or late, and it is appalling to notice the morbidity and the calm convalescence which has been associated with these cases. Some very outstanding surgeons have told us that it is possible for us to have been given the fortitude by the use of sulfanilamide powder to close these cases without drainage, but at any rate our mortality is approaching zero in appendicitis, and by the many methods of postoperative treatment which are being followed by us, we are not having mortality or morbidity from thrombosis and other diseases incident to the recovery from general peritonitis.

Each reader is urged to read this article published in the *Reader's Digest,* since it is timely and well written.

—L. W. L.

THE PROBLEM OF APPENDICITIS

You will read with interest the story of Dr. Jere Crook's reminiscences of a case of appendicitis. Dr. Crook is one of the pioneers in the gospel of sound sense in handling appendicitis. Dr. J. Gordon Dees, formerly of Memphis and now of Jackson (Miss.), instituted a far-reaching development when he began the use of sulfanilamide powder in ruptured appendices, publishing his first report in this journal in September, 1940. Great progress has been made in supportive postoperative treatment. We have learned much in many ways within the last thirty years about appendicitis, but even so there is much we do not know even yet, or rather that we do not achieve. Many members of the medical profession are not accurate in the diagnosis of a simple acute appendix with the classical symptoms; a percentage still dynamite the abdomen with a purgative for undetermined pain; many have not yet learned the value of time in handling the acute appendix. Regardless of the measures we have at hand, Dr. Time is the most important person connected with the reduced death rate in appendicitis. It is a bad policy to wait until a man is going down the third time to rescue him from the watery grave. The length of the incision, the angle at which the knife is held in making it, the price of the room at the hospital, tile floors and nickel fittings are comparatively non-essential. Delaying the operation for a certain number of hours after the onset is a dangerous doctrine to practice.

Every doctor should know the signs and symptoms of the typical acute appendix: constant pain, tenderness over appendix, nausea, fever, and leucocytosis. Every doctor should learn that he can nearly always see an acute appendix through the tips of his fingers if he trains them properly, never letting the dollar nor any other non-conductor of the truth get between them and the sick organ. The laity must have further education on the significance of abdominal pain. They should be taught to count every abdominal pain that lasts for one hour without a let-up appendicitis until the doctor can prove it otherwise. The country weekly newspaper is the best means to reach the people who really need the information. The motion picture is also fine. The hospital and the doctor's office waiting-room should have a film going on this and other subjects while the clientele wait. In the small town every doctor, dentist, and the public health department should be housed in one building and thus provide common support of the picture reel and the library, and untold value in medical information for the laity.

Another most important factor in lowering the death rate from appendicitis is to have a bed ready for every case within a distance of thirty miles. Long journeys to the city are not conducive to a lowered death rate and economically they are too expensive. It is better to have an operation for acute appendicitis in a six-bed hospital by a country surgeon within six hours of the onset than a Mayo in the largest hospital in the world three days later. The country surgeon has need of the specialist oftentimes and he should ever be honest enough with his patient to refer him, but the specialist should be fair enough not to encourage the average case of appendicitis to be transported to him. Nevada has the highest death rate from appendicitis, and South

Carolina the lowest. It is well to study the hospital distribution in these states. Mississippi's per capita distribution of funds for the indigent sick, though not a perfect plan, is having its influence on lowering the appendicitis death rate.

Of course we appreciate the article by Dr. Paul de Kruif in the February issue of the *Reader's Digest* in which he mentioned the *Mississippi Doctor* and the report by Dr. J. Gordon Dees of twenty-five cases of perforated appendices in which powdered sulfanilamide was used. These cases were treated at the John Gaston Hospital in Memphis. As we recall, Dr. Lucius McGehee asked us to give consideration to this report. Dr. Dees was soon afterward associated with Dr. Lawrence Long, of Jackson, and they together did further work along this line. Dr. Long has discussed this plan of treatment editorially. This journal has always encouraged the man who is doing original thinking, regardless of who he is or where found.

We believe that many of the heroes of the World War II in which we are new engaged will be found in the general practitioners of medicine in our country, especially in Mississippi and the South. Their work is going to be very heavy and it is very important. They are the salt of the earth. Right at this time every big hospital in the country giving a two-year internship should send its men out with a country doctor for the last six months of it. This would help relieve the shortage of physicians out in the country where the democratic leadership of the world is to be found and it would be the very best training these young men could possibly have. This is reason and good sensible medical economy.

The Mississippi State Medical Association is on record as favoring a fair workmen's compensation law. Mississippi is the only state in the union that does not have one now. The enactment of this law would enable the state to secure more factories, which in turn would help to increase the cash income of our people. The law might also help to solve the economical factor in our medical problems. The medical profession can do much to have this law enacted.

You will note in the ad of the Welch Sanitarium that Dr. Leonard Wright, M.D., is now medical director of this fine institution. The picture indicates that this well-located sanitarium is a very beautiful place and, with Dr. Wright in charge, efficient service is assured. Dr. Wright was medical director of the well-known Wallace Sanitarium of Memphis before going to Jackson.

THE DOCTORS MAYO is a book that every doctor should read. This book furnishes a wealth of information and inspiration. The Majors Book Company in New Orleans and Dallas can supply it for you. You will see it on display at the Mid-South at their booth.

Don't fail to visit the exhibitors at the Mid-South and let them know that they are appreciated, that they are helping to make the Mid-South what it is. Dr. Gilbert Levy has done a fine job for this association in securing so many exhibitors.

This journal appreciates its advertisers. Everything else being equal, we hope that you will trade with those who take space with us. It will not hurt you and it will help to give a better journal.

We are deeply thankful to the doctors who carry courtesy cards with us. It is a convenience to the doctors who wish to refer patients, and it is a nice gesture of good will to us.

Dr. C. M. Speck is extending a most cordial invitation to all members of the Past-Presidents Club to be present at the banquet he is giving at the Peabody Hotel on Wednesday night, February 11.

We shall have been actually at war for two months or more when these lines are read. What will be the situation then as regards the medical set-up in Mississippi? Approximately thirty-five thousand doctors will be needed in the military service. Mississippi will, of course, furnish her just quota of these. Practically every doctor under forty-five years of age will be called into duty. Mississippi has less than four hundred doctors of that age. It will be found necessary for many who are older than forty-five to be accepted if our quota is furnished. Hence there will be not exceeding seven or eight hundred left to serve civilian and industrial requirements. Of these, two or three hundred are over seventy years old. This group is better qualified to deliver dependable medical service than any group of like number in the state, except for the physical handicaps of increasing age. Unfortunately, but inevitably, these handicaps are becoming greater with every passing day. Hence this group of aging men can not be depended upon to carry any additional load, and it would be unfair to them to ask them to do so. With these two groups, those below forty-five and those above seventy eliminated or counted out, only about six hundred are left in the state. And this group is in the cancer and heart zone. Probably a larger percentage of deaths will occur in this group than in the older group. The question naturally arises: How may satisfactory medical care be provided for our more than two million citizens? In a recent newspaper discussion it was suggested that the government might be forced to provide it. How can this be done? It takes doctors to care for sick people. More hospitals will not solve the problem—neither will larger hospitals do it. Mississippi probably has more community hospitals per capita than has any other state, but the lack of medical care becomes more acute as the number of hospitals increases. The report that recently was given public notice sets out that men coming into the ranks today are neither willing nor equipped to do country work. This is only too true. Why is this true? First because the teaching of today is not up to past standards—students are not taught to use their heads and depend upon their own wits to meet emergencies as they arise. They have been taught to believe that good medical care can only be given in hospital wards. Again they are unwilling to do themselves what they expect nurses to do in these wards. Of course it is easier to treat a patient in a hospital where conveniences are at hand, and it is nicer to boss a job than to do the work. But a vast majority of Mississippi sick folk can not even hope to get into a hospital. Because this is true, must they be left to suffer and die like rats? Might it not be better to subsidize these old men who do know how to render good and efficient service outside of hospitals and the young men as well who are willing to learn how to do it? If the government is to take a hand in this necessary and humane program, I say let it contribute something to these old soldiers that have given their lives to the work in order that they may continue to carry on for the length of the emergency. The crisis is here, the urgency is great. It should and must be met. I insist that the appropriation to care for the indigent sick should be increased. There is one ray of hope, one silver lining to the black cloud that has already overshadowed us. When all doctors under forty-five years of age shall have been inducted into the service, there will be less unnecessary surgery done and, perhaps, more necessary service rendered to the sick.

Now let me sound a warning. As and when our young men are inducted into service and are taken away from their chosen field of work, a tremendous responsibility falls upon those who are left. The work will be more than doubled and it must be done and done well. Those who remain must realize that the people who will need and call them expect and have a right to demand faithful and scientific service. Society meetings and medical assemblies must be attended. No one must lag in line of duty nor fall behind in the progress of medical thought and practice. All must be prepared to turn the ship over to those who return with a clean keel and fully conscious of the fact that these men who have gone out, will be better prepared and fitted for the duties and responsibilities that they will resume than they were when they left. We love them now and we must be ready to honor them when they return. If we who remain shall do our duty as well as I am sure they will I do not doubt that they will gladly honor us. Whether we go or stay, let us remember that we are brothers and co-workers in a glorious field.

—G. S. B.

PROVISION OF MEDICAL OFFICERS FOR MILITARY SERVICES

Editorial from the Journal of the American Medical Association, January 17, 1942.

The questionnaires published in recent issues of the Journal elicited many thousands of replies. The requirements of military necessity do not permit stating the exact numbers of names which have been furnished to the Surgeon General at this time or the number who will be requested to come immediately into the service. Appreciation is tendered particularly to the secretaries of state medical societies and to the editors of state medical journals, who gave complete coöperation in circularization of the appeal to the medical profession.

Under Medical Preparedness in this issue of the Journal appears a statement from the Procurement and Assignment Service regarding the present status of needs of the armed services and other federal agencies, and regarding also actions recently taken by the Board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians in relation to some questions that have been raised. Every physician in the United States is likely to find before the war is over that special need for his services in some capacity has arisen. The number of physicians to be called into the armed services clearly is sufficiently great to dislocate much of the present status of medical practice. One needs only to point out that the expansion of the Army by another million men would require at least seven thousand additional physicians. An army of four million men would necessitate a total of about thirty-two thousand physicians taken from civilian practice. Moreover, the call is primarily for men under 36 years of age and at most under 45 years of age. On January 15 every medical reserve officer in a governmental department or agency and physically fit was notified that he would be considered available for active duty.

The whole purpose of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians is to provide for the needs of the armed forces with the minimum amount of dislocation of medical service to civilian needs, including public health agencies, industrial plants and medical education. Another primary purpose is to place, as far as possible, men with special qualifications in duties for which they are particularly fitted. These purposes can be accomplished with the complete coöperation of the medical profession. Should the war be prolonged, however, from two to three years the majority of physicians under 45 years of age who are not physically fit to meet the standards of the Army and the Navy will unquestionably be called on for additional services beyond the practices in which they are now engaged. The needs of civilian defense, industry and public health must be met. The Procurement and Assignment Service plans to give to every physician who enrolls with that service for assignment a certificate and a numbered button to indicate that he has made himself available to the nation in this time of emergency. The medical profession can be depended on to do its utmost. Let us not fail!

News and Comments

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The sixth annual meeting of The New Orleans Graduate Medical Assembly will be held March 2 through March 5, headquarters at the Roosevelt Hotel. The popularity which the assembly has enjoyed at the past meetings gives proof that the program offers the type of intensive post-graduate study the medical profession desires, presenting many new and outstanding features which are of interest to the specialists, as well as the general practitioner.

In keeping with the established policy, eighteen guest speakers will be on the program, each one prominent in medical circles. The Section on Surgery will be represented by two guest speakers, Dr. Frank H. Lahey, President of the American Medical Association, and Col. Norman T. Kirk, Director of Surgery, Army Medical School, Army Medical Center, Washington, D. C.

The Section on Medicine will also have two guest speakers, Dr. William H. Sebrell of Washington, D. C. and Dr. William B. Porter of Richmond, Virginia.

It would be impossible to enumerate here the names and subjects of all of the essayists but each speaker is among the country's foremost medical educators and their participation in the meeting will play an important part in its success. A complete list of the speakers, together with their specialties, is carried in this issue of the journal. (See page 481)

In addition to the lectures many other features will add to the value of the meeting. The numerous scientific exhibits will be of great interest and there will be approximately sixty exhibits on display by ethical manufacturers of drugs and equipment.

It is hoped that many doctors will plan now to set aside a few days from their regular routine and attend the Assembly. The meeting offers an excellent opportunity to combine post-graduate work together with the establishment of good fellowship. The registration fee of ten dollars covers all features, including four daily round-table luncheons.

RECOMMENDATIONS TO ALL PHYSICIANS WITH REFERENCE TO THE NATIONAL EMERGENCY

1. *Medical Students*

A. All students holding letters of acceptance from the dean for admission to medical colleges and freshmen and sophomores of good academic standing in medical colleges should present letters or have letters presented for them by their deans to their local boards of the Selective Service System. This step is necessary in order to be considered for deferment in Class II-A as a medical student. If local boards classify such students in Class I-A, they should immediately notify their deans and if necessary exercise their rights of appeal to the Board of Appeals. If, after exhausting such rights of appeal, further consideration is necessary, request for further appeal may be made to the State Director and if necessary to the National Director of the Selective Service System. These officers have the power to take appeals to the President.

B. Those junior and senior students who are disqualified physically for commissions are to be recommended for deferment to local boards by their deans. These students should enroll with the Procurement and Assignment Service for other assignment.

C. All junior and senior students in good standing in medical schools, who have not done so should apply immediately for commission in the Army or the Navy. This commission is in the grade of Second Lieutenant, Medical Administrative Corps of the Army of the United States, or Ensign H. V. (P) of the United States Navy Reserve. the choice as to Army or Navy being entirely voluntary. Applications for commission in the Army should be made to the Corps Area Surgeon of the Corps Area in which the applicant resides and applications for commission in the Navy should be made to the Commandant of the Naval District in which the applicant resides. Medical R.O.T.C. students should continue as before with a view of obtaining commissions as First Lieutenants, Medical Corps, upon graduation. Students who hold commissions, while the commissions are in force, come under the jurisdiction of the Army and Navy authorities and are not subject to induction under the Selective Service Act. The Army and Navy authorities will defer calling these officers to active duty until they have completed their medical education and at least 12 months of internship.

II. *Recent Graduates*

Upon successful completion of the medical college course. every individual holding commission as a Second Lieutenant, Medical Administrative Corps, Army of the United States, should make immediate application to the Adjutant General, United States Army, Washington, D.C., for appointment as First Lieutenant, Medical Corps, Army of the United States. Every individual holding commission as Ensign H. V. (P), U. S. Navy Reserve, should make immediate application to the Commandant of his Naval District for commission as Lieutenant (J. G.) Medical Corps Reserve, U. S. Navy. If appointment is desired in the grade of Lieutenant, (J. G.) in the regular Medical Corps of the U. S. Navy, application should be made to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

III. *Twelve Months Internes*

All internes should apply for a commission as First Lieutenant, Medical Corps. Army of the United States, or as Lieutenant (J. G.), United States Navy or Navy Reserve. Upon completion of 12 months interneship, except in rare instances where the necessity of continuation as a member of the staff or as a resident can be defended by the institution, all who are physically fit may be required to enter military service. Those commissioned may then expect to enter military service in their professional capacity as medical officers; those who failed to apply for commission are liable for military service under the Selective Service Acts.

IV. *Hospital Staff Members*

Internes with more than 12 months of interneship, assistant residents, fellows, residents, junior staff members, and staff members under the age of 45, fall within the provisions of the Selective Service Acts which provide that all men between the ages of 20 and 45 are liable for military service. All such men holding Army commissions are subject to call at any time and only *temporary deferment* is possible, upon approval of the application made by the institution to the Adjutant General of the United States Army certifying that the individual is temporarily indispensable. All such men holding Naval Reserve commissions are subject to call at any

(Continued on page 468)

DR. CLYDE M. SPECK

WHITFIELD, MISSISSIPPI

PRESIDENT OF THE MID-SOUTH POSTGRADUATE MEDICAL ASSEMBLY

Dr. Speck is a native of Union County, Miss.; born July 22, 1887. His family have been residents of Union and Pontotoc counties for 130 years. He attended the free schools of Union County, Mississippi Heights Academy at Blue Mountain. Memphis Hospital Medical College and Vanderbilt University, where he was graduated in medicine in 1912. He passed his state board examination for license in 1910. Following his graduation Dr. W. S. Leathers assigned him to a hookworm survey under the Rockefeller Foundation for a period of six months. He practiced at Ellistown in his home county for three years. In 1916 he married Miss Carrie M. Mayes. He entered the war in 1917, was stationed at El Paso, Texas, and also at Fort Sam Houston. After the war he entered practice at New Albany, Miss.

Dr. Speck organized and built the New Albany Hospital in 1928. He has taken work in New Orleans, Chicago, and New York, served as vice-president of the Mississippi State Medical Association, and is a fellow of the American College of Surgeons. On December 1, 1940, he was appointed assistant superintendent of the Mississippi State Hospital at Whitfield and on the death of Dr. C. D. Mitchell Jan. 26, 1942, he became superintendent of the institution.

Dr. Speck is a member of the First Baptist Church of Jackson, a Shriner, member of the Jackson Kiwanis Club.

Dr. and Mrs. Speck have one daughter who is a senior at Ole Miss.

Dr. Speck is a man of more than average native ability. He does his own thinking and he has the courage to back his convictions. He is outstanding in executive ability, is progressive, loyal and dependable.

DR. CHARLES H. LUTTERLOH

HOT SPRINGS, ARKANSAS

Dr. Lutterloh will take over the office of president of the Mid-South Postgraduate Medical Assembly at the close of the 1942 session. He is a graduate of Tulane Medical School, a fellow of the American College of Physicians, and a diplomate of the American Board of Internal Medicine. He is one of the able, outstanding and progressive young physicians of the Mid-South. He has poise and balance and will prove to be a safe leader. Dr. Charles Lutterloh has the professional mind, the medical soul, and the missionary heart. We will follow his leadership with faith and trust.

DR. A. F. COOPER

SECRETARY

Dr. Cooper possesses good judgment in making up the programs, splendid ability in securing suitable men, and is a past master in handling the details of a medical convention.

DR. GILBERT J. LEVY

CHAIRMAN OF EXHIBITS

Dr. Levy has had charge of the exhibits for the Mid-South for about sixteen years. His fine service in handling this job has meant much to the success of this assembly. He is able and diplomatic and is everlastingly on the job.

DR. F. H. JONES

Piggott, Arkansas

Vice-President from Arkansas

Dr. Jones was born at Little Springs, Miss., Feb. 16, 1889. He received his early education at Little Springs High School; took his premedical course at Mississippi College at Clinton; was graduated from Memphis Hospital Medical College in 1912, and interned at Memphis City Hospital, 1912-13. Dr. Jones has been doing general practice at Piggott since 1913. He is councilor of the first district of Arkansas Medical Society. Dr. Jones started right by being born in Mississippi. Then, since he yearned a change, he did well to go to the good state of Arkansas.

DR. JOHN JACKSON

Dyer, Tennessee

Vice-President from Tennessee

Dr. Jackson received his A.B. from University of Tennessee in 1910; M.D. from Vanderbilt in 1914. He has been doing general practice at Dyer. Tenn., since his graduation. He served as first lieutenant in the U. S. Army Medical Corps in 1918. Dr. Jackson has been an active member of the Gibson County Medical Society since his graduation, serving as president on several occasions. He was assistant secretary of the West Tennessee Medical and Surgical Association for a number of years, and vice-president of Tennessee State Medical in 1939. We don't know whether he is related to Thomas Jonathan Jackson (Stonewall) or not, but he possesses some of the same admirable qualities.

DR. J. J. KAZAR

Tchula, Mississippi

Vice-president from Mississippi

Dr. Kazar received his pre-medical education at Vanderbilt University. He enlisted in Alabama National Guard in 1916; did border duty at Nogales, Ariz., as sergeant in the hospital corps, 2nd Division A.E.F., attached American Balloon Corps. Dr. Kazar served his internship at Memphis General Hospital. He is past district commander of the American Legion; district commander of the V.F.W., Grand Voiture of Mississippi. He took the Commonweath postgraduate course at Tulane in 1936. Dr. Kazar has been practicing in Tchula since 1925. He is railway surgeon for the Y. and M.V.; a member of the local school board and past-president of the Rotary Club. Dr. Kazar is a mighty clever fellow and is full of activity. He has been a regular attendant of the Mid-South for many years.

DR. HIRAM A. LAWS, JR.

CHATTANOOGA, TENNESSEE

PRESIDENT OF TENNESSEE STATE MEDICAL ASSOCIATION

Dr. Laws was born at Thompson's Station, Tenn. He spent his early life on a farm with his father, Dr. Hirman A. Laws, a prominent doctor of middle Tennessee. He received his medical education at the Medical University of Nashville (Tenn.), graduating from there in 1909. He served an internship at St. Thomas Hospital, Nashville, in 1909-1910. After completing his internship he practiced medicine at Lynchburg, Tenn., for seven years. He volunteered his services to the Army soon after war was declared in 1917 and was commissioned a first lieutenant in the Medical Corps. After being discharged from the Army in 1918 he took postgraduate work at Bellevue and Harlan hospitals, New York City. Dr. Laws began general practice in Chattanooga in 1919. He is a member of the Chattanooga and Hamilton County Medical Society, the Tennessee State Medical Association, the American Medical Association and a fellow of the American College of Surgeons. He is a Mason, a Shriner and a member of the Mountain City Club of Chattanooga. He is a man of sterling character, fearless and honorable and able to carry the fight to completion. He possesses an engaging personality along with executive ability—a fine combination to be found in any man.

DR. H. FAY H. JONES

LITTLE ROCK, ARKANSAS

PRESIDENT OF THE ARKANSAS STATE MEDICAL ASSOCIATION

Dr. Jones is a native of Arkansas, having been born in Charleston, Feb. 14, 1897. He is a son of the late Dr. William E. Jones and Mrs. Annie Phoebe Jones of Little Rock. He received his A.B. from Little Rock College and his M.D. from the University of Arkansas in 1918, when he began practice in Little Rock. He has taken postgraduate work in Chicago, Paris, London, and Budapest. He now holds the chair of urology at the University of Arkansas School of Medicine. He is a fellow of the American College of Surgeons and the American Board of Urology, and has recently been reëlected to serve as governor from Arkansas for the American College of Surgeons. He served as president of the Mid-South Postgraduate Medical Assembly in 1940. He is medical director for Civilian Defense for the state of Arkansas. His memberships include the Phi Rho Sigma medical fraternity, the Episcopal Church and the Masonic Lodge (Thirty-Second Degree Mason). Of course the Jones family is a big one, but Dr. Fay is a very distinct personality, a most active leader in medicine, a progressive citizen, and a magnetic and likable person.

DR. A. STREET

VICKSBURG, MISSISSIPPI
PRESIDENT OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

Dr. Street is a native of Mississippi, born in Corinth. He received his medical degree from Columbia University and interned in the Roosevelt Hospital in New York. He received his license to practice in Mississippi in 1913. During the World War I he served with the American Expeditionary Force, Base Hospital No. 15. Chamount, France, from July 1917 to the end of the war.

He served as president of the Mississippi Hospital Association in 1937. He has always taken time out for organized medicine.

Dr. Street is an able surgeon, a princely gentleman, and a constructive thinker with mental honesty and medical integrity.

DR. E. M. HOLDER

PRESIDENT SHELBY COUNTY MEDICAL SOCIETY

Dr. E. M. Holder of Memphis, a native of Mississippi. He is an artist in living the health rules he gives to others. We wrote him for a paper for this special Mid-South issue of the journal. He was too busy to translate the discourse. We forgive him. We found, however, an account of some of his medical philosophy in a *Press-Scimitar* news item which we think you will enjoy. Dr. Holder is one of the great surgeons of the Mid-South and he is really one of the great men. He is a great citizen, possessing medical integrity and a heart full of love for humanity.

MEDICAL SOCIETY'S PRESIDENT BLASTS SOME OLD SUPERSTITIONS ON ILLNESS

Dr. E. M. Holder, incoming president of the Memphis and Shelby County Medical Society, rebelled at the stipulation of President C. E. Thompson of the Memphis Hospital Association that he should talk for only three minutes at the Hospital Association's annual banquet at Hotel Peabody.

Dr. Holder agrees with the American humorist who said that people "know a lot of things that ain't so." Out of a medical practice that has covered 44 years, he has some very definite opinions on some things that "ain't so." He told the superintendents, technicians and nurses that:

1. Cut flowers do not harm a sleeping patient and need not be removed from the room overnight. "Yet I stumble over flowers every morning when I walk down the hospital hall."

2. That "ozone" is good for you. "It's poison."

3. That a person goes down three times before drowning. "You had better not rely on that. Get him out the first time."

4. That a person's hair will turn gray overnight from fright. True, some people have a hereditary disposition to turn gray early in life and suddenly. If this occurs after a fright

or worry it is pure coincidence."

5. That a person bitten by a mad dog will inevitably get rabies. "If a person is bitten on the bare skin (hands and face), the chances are only about 50 per cent that he will get rabies. If bitten through the clothing, the chances of infection are only 18 per cent. A hydrophobia patient doesn't avoid water; he wants it, but his throat contracts and he can't drink it."

6. That there are only five senses. "There are 11." The other six are: Muscular sense, such as is translated to muscles when lifting a weight; sense of pain, sense of temperature, sense of distance, which enables blind persons to determine distance; static sense, which maintains body equilibrium; sense of articulation, meaning a consciousness of the body joints.

Takes His Time

It appeared that Dr. Holder had no conscience, or at least no fear of being rapped down by Toastmaster Thompson, as he expounded these interesting themes for many times three minutes, but at last he bowed himself out with the story, one of those good old ones, about the fellow that was accidentally hit by the speaker's fist, passed out, was revived and said "Hit me again; he is not through yet."

Some More, Even

The *Press-Scimitar* obtained Dr. Holder's notes and found he had not finished. There were more points and here they are:

1. A person does not suffer for many days from simple hiccoughs and then die as a result of them. There is always an accompanying ailment. "There are as many so-called cures for hiccoughs as there are leaves on an aspen tree."

2. Powdered glass mixed with food will not kill a person.

3. Indirect lighting is the best kind for the eyes.

4. A high color index is not indicative of health.

5. The average person falling from great height would not become unconscious before striking the ground.

Dr. Edward Dana Mitchell was presented as one who has practiced medicine for 40 years, yet is so vigorous that he is just completing a year as president of Memphis and Shelby County Medical Society. Dr. Mitchell paid tribute to the Hospital Association as the "helpmate of medicine."

THE FOLLOWING essayists will address the fifty-seventh session of the Mid-South Postgraduate Medical Assembly. Make your plans to hear as many of these men as possible, not forgetting the luncheon hours.

DR. LUDWIG AUGUSTUS EMGE

SAN FRANCISCO, CALIFORNIA

Executive and Clinical Professor of the Department of Obstetrics and Gynecology, Stanford University School of Medicine.

Dr. Emge was educated in Germany, France and Italy; received his B.S. in Chicago, in 1912. He was assistant in anatomy, Chicago, 1912-13; assistant in pathology, Rush Medical College, 1913-14; M.D., 1915; interne, Durand and Presbyterian hospitals 1914-15; resident in obstetrics and gynecology, University of California Hospital, 1915-17. He has been at Stanford since 1917. Dr. Emge is the author of many papers on obstetrics and gynecology. He has been actively engaged in cancer research for the last twelve years. He is a member of a number of national and Pacific Coast medical societies, a director of the American Board of Obstetrics and Gynecology.

Time: Tuesday, February 10, 10:00 A.M.

Subject: Placental Accidents and Their Treatment.

DR. FRANCIS L. LEDERER

CHICAGO, ILLINOIS

Professor and head of the Department of Otorhinolaryngology, University of Illinois, College of Medicine. Dr. Lederer received his medical degree from Rush Medical College, which, at that time, was still affiliated with the University of Chicago but has been recently taken over by the University of Illinois. He did several years of postgraduate work in Vienna and other European cities. Dr. Lederer is a member of the major otolaryngological societies, as well as the A.M.A., and a fellow in the American College of Surgeons. He is the author of "Diseases of the Ear, Nose and Throat" which has proved popular as a textbook in all of the leading medical schools in the U. S. and also in South America.

Time: Tuesday, February 10, 11:00 A.M.

Subject: Significance of Hoarseness.

DR. PHILIP M. STIMSON
NEW YORK CITY

Assistant Professor of Pediatrics Cornell University Medical College. Associate Attending Pediatrician at the New York Hospital. Dr. Stimson received his A.B. from Yale in 1910 and M.D. from Cornell in 1914. He served two years' internship at the New York Hospital and one year as assistant resident at the St. Louis Children's Hospital. He served in the Army in the World War two years, twenty-one months of which was in France. He has been practicing in New York City since that time. He is visiting physician at the Willard Parker Hospital, medical director of the Floating Hospital, chairman of the Section on Pediatrics of the American Medical Association for 1941 and 1942; chairman of the Committee on National Defense of the American Academy of Pediatrics. Author of the book, "A Manual of the Common Contagious Diseases" now in its third edition.

Time: February 10, 2:00 P.M.

Subject: Practical Aspects of the Common Contagious Diseases.

DR. FRANCIS M. RACKEMANN
BOSTON, MASS.

Dr. Rackemann was born in 1897. He received his M.D. from Harvard Medical School in 1912. He is associate in medicine at Harvard. He is a member of the American Association for the Study of Allergy (President in 1934); the American Association of Clinical Investigation; the American Clinical and Climatological Association (sec'y. 1933, the A.C.P., and the Association of American Physicians.

Time: Tuesday, February 10, 3:00 P.M.

Subject: The Causes of Asthma, Their Diagnosis and Treatment.

DR. A. D. RUDEMANN
CLEVELAND, OHIO

Dr. Ruedemann is Chief of Staff, Department of Ophthalmology, at the Cleveland Clinic, Cleveland, Ohio.

Time: Tuesday, February 10, 4:00 P.M.

Subject: Headaches and Head Pain of Ocular Origin.

DR. IRVINE H. PAGE
INDIANAPOLIS, IND.

Dr. Page is a graduate in chemistry and medicine of Cornell University. After two years in the Presbyterian Hospital he went to Germany as director of the Chemical Division of the Kaiser Wilhelm Institute in Munich. After four years he returned to the Hospital of the Rockefeller Institute with Dr. D. D. Van Slyke. Six years later he became director of the Lilly Clinic and Laboratory for Clinical Investigation in Indianapolis.

Time: Tuesday, February 10, 8:00 P.M.

Subject: The Nature and Treatment of Arterial Hypertension.

DR. W. WAYNE BABCOCK
PHILADELPHIA, PA.

Dr. Babcock received his M.D. degree from the College of the Physicians and Surgeons, Baltimore, in 1893; was graduated School of Medicine University of Pennsylvania, 1895, Medico-Chirurgical College, Philadelphia, 1900; hon. A.M. from Pennsylvania College, Gettysburg, Pa., 1904; L.L.D., Temple University, 1936. He was demonstrator and lecturer of pathology, Medico-Chirurgical College, 1896-

1903; prof. of oral surgery, Philadelphia Dental College, 1907-08; chief of Surgical Department, U. S. General Hospital, No. 6, Ft. McPherson, Ga., 1917-1918; fellow American College of Surgeons; member American Therapeutic Society (Pres. 1917-18) Pathological Society of Philadelphia; American Association Obstetricians, Gynecologists and Abdominal Surgeons; prof. surgery and clinical surgery, Temple University School of Medicine; surgery-in-chief Temple University Hospital, from 1903 to date, and surgeon for Philadelphia General Hospital.

Time: Tuesday, February 10, 9:00 P.M.

Subject: Prevention and Control of Peritonitis.

DR. REED M. NESBIT

ANN ARBOR, MICHIGAN

Associate Professor of Surgery, and Chief Service of Urology, University Hospital, University of Michigan. Dr. Nesbit received his M.D. from Stanford in 1924; served his internship in Fresno, California, 1924-25; was assistant resident at the University of Michigan 1925-26; Instructor at University of Michigan, 1929-33. He has been associate professor at the University of Michigan since 1933.

Time: Wednesday, February 11, 9:00 A.M.

Subject: Chronic Pyelonephritis, A Lethal Disease.

DR. DAVID COLE WILSON

CHARLOTTESVILLE, VA.

Professor of Neurology and Psychiatry, University of Virginia. Dr. Wilson was born in Chattanooga Tenn., July 13, 1892. He received his B.A. degree from the University of Virginia in 1912; M.D. in 1919. He took graduate work at Phipps Clinic in 1928 and at the University of Pennsylvania in 1923. Served internship at Peter Bent Brigham Hospital, 1920-21 and was internist at Clifton Springs Sanatorium, 1921-23, with Neurology and Psychiatry Dept., 1923-28. He is a member of the Virginia Medical Society, Virginia Neuropsychiatric Society (Pres. 1936), A.M.A., Southern Medical Assn., the Mental Hygiene Society of Virginia (Pres. 1941) and many other medical associations. Author of numerous articles, including "The Psychiatrist Looks at War," 1941.

Time: Wednesday, February 11, 10:00 A.M.

Subject: Practical Methods of Diagnosis in Nervous and Mental Diseases.

DR. HARRY E. BACON

PHILADELPHIA, PA.

Dr. Bacon is clinical professor of proctology, Temple University School of Medicine; proctologist St. Mary's Hospital; Consultant proctologist, National Stomach, Douglass Memorial and Paul Kimball hospitals. Formerly Associate prof. of proctology, Graduate Hospital, University of Pennsylvania. Dr. Bacon received his M.D. from Temple University School of Medicine, did postgraduate work at London, Paris, and Vienna. He is the author of *Anus, Rectum and Sigmoid Colon*, first and second editions which have been translated into Spanish and Portuguese, also of innumerable scientific papers.

Time: Wednesday, February 11, 11:00 A.M.

Subject: Diagnosis and Recent Advances in the Treatment of the More Common Anorectal Diseases.

DR. FRANK W. KONZELMANN

PHILADELPHIA, PA.

Professor Clinical Pathology, Temple University Medical School, from 1930 until present time. Dr. Konzelmann was born in Philadelphia in 1894. Graduated Jefferson Medical College in 1919. He was demonstrator in pathology, and later assistant professor of pathology, Jefferson Medical College from 1922-1930. He is a lieutenant commander in the Medical Corps, U. S. Naval Reserve. His hobbies are deep-sea fishing and woodwork.

Time: Wednesday, February 11, 2:00 P.M.

Subject: Recent Advances in Clinical Pathology; Aids in the Diagnosis and Treatment of Disease.

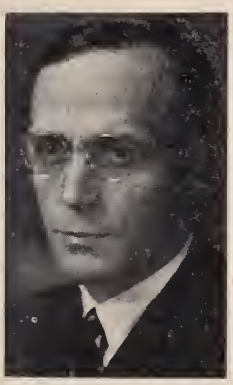
FRANK N. WILSON
ANN ARBOR, MICHIGAN

Dr. Wilson was born near Detroit. He received his M.D. degree at University of Michigan in 1913. He was instructor in medicine at Michigan from 1914 to 1916 and at Washington University from 1916 to 1920. He has been professor of medicine at Michigan since 1924. He was at Military Heart Hospital with Thomas Lewis from Oct. 1917 to Jan. 1919. Author of eighty articles on various phases of heart disease, dealing for the most part with the electrocardiogram. He is a member of the Association of American Physicians, American College of Physicians, American Society of Clinical Investigations, etc. He is a member of the Editorial Board of *American Heart Journal* and *Journal for Clinical Investigation*, and an honorary member Cardiac Society of Great Britian and Ireland.

Time: Wednesday, February 11, 3:00 P.M.

Subject: Angina Pectoris.

DR. WARREN H. COLE
CHICAGO, ILL.



Head of Department of Surgery, University of Illinois, College of Medicine. Dr. Cole was born July 24, 1898. He received his education at Kansas University and his medical degree at Washington University, School of Medicine, St. Louis, in 1920. Spent one year as intern at City Hospital in Baltimore and the next five or six years on the surgical house staff at Barnes Hospital, St. Louis. He then became a member of the teaching staff and remained until 1936. From 1936 up to the present time he has been with the University of Illinois, College of Medicine, as head of the Department of Surgery. Dr. Cole was the co-discoverer of cholecystography (with E. A. Graham). He has published many articles on this subject and others related to the gall-bladder. He has also completed and published reports dealing with experimental studies on the thyroid.

Time: Wednesday, February 11, 4:00 P.M.

Subject: Indications for Splenectomy.

DR. STANLEY GIBSON
CHICAGO, ILL.

Professor of Pediatrics and Chairman of the Department of Pediatrics of Northwestern University Medical School. Dr. Gibson is senior pediatrician at St. Luke's Hospital and attending physician at Children's Memorial Hospital.

Time: Thursday, February 12, 9:00 A.M.

Subject: The Diagnosis of Chest Conditions in Childhood.

DR. BURRILL B. CROHN
NEW YORK CITY

Dr. Crohn received his B.A. degree from the College of the City of New York in 1902 and his M.D. from the College of Physicians and Surgeons in 1907. He served as intern at the Mount Sinai Hospital from 1907 to 1911; the first ten years he was an associate in chemistry, later an associate in general medicine, and in recent years as a gastroenterologist. He holds a consultant position in several hospitals, including St. Joseph's in Far Rockaway, N. Y., Rockaway Beach Hospital, Beth Isreal, Newark, N. J. He is also consultant to the United States Veterans Hospital, New York City, and to the Federal Trade Commission. His principal teaching position is Associate in Medicine, Columbia University (postgraduate).

Time: Thursday, February 12, 10:00 A.M.

Subject: The Chronic Diarrheas.

DR. WALTER T. DANNREUTHER

New York City

Professor of Clinical Gynecology and director of the department, New York Postgraduate Medical School and Hospital, Columbia University. Dr. Dannreuther was graduated from the Long Island College Hospital in 1906. He is past-president of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, and the Medical Society of the County of New York Postgraduate Hospital, and consulting obstetrician and gynecologist to several hospitals in New York City and vicinity. He is president of the American Board of Obstetrics and Gynecology.

Time: Thursday, February 12, 11:00 A.M.

Subject: Retrodisplacements of the Uterus.

DR. EUGENE P. PENDERGRASS

Philadelphia, Pa.

Professor of Radiology at the University of Pennsylvania, and the director of the Department of Radiology, Hospital of the University of Pennsylvania.

Time: Thursday, February 12, 2:00 P.M.

Subject: The Role of the Radiologist in the Investigation of Lesions Involving the Small Intestine.

DR. LEROY SCHALL

Boston, Mass.

Walter Augustus LeCompe Professor of Otology and Professor of Laryngology, Harvard, Medical School; Chief of Otology and Laryngology, Massachusetts Eye and Ear Infirmary. Dr. Schall is a graduate of the Jefferson Medical College, 1917; served two years in the Medical Corps, U. S. Army, with service in France in the last World War for twenty months. Served three years with the U. S. Public Health Service. He is a member of all the national special ear, nose and throat societies, serving as secretary on the Section of Otology, Rhinology and Laryngology of the American Medical Association, 1938-40; chairman of the section, 1941; first vice-president, Academy of Otolaryngology and Ophthalmology, 1934.

Time: Thursday, February 12, 3:00 P.M.

Subject: Diagnosis and Treatment of Cavernous Sinus Thrombosis.

DR. DERYL HART

Durham, N. C.

Chief of the Surgical Staff of Duke Hospital. Dr. Hart attended Emory University, Atlanta, Ga., receiving his A.B. degree in 1916 and A.M. degree in 1917. Received his M.D. degree from Johns Hopkins Medical School in 1921. He was on the resident staff at the Johns Hopkins Hospital from 1921-29 when he held the position of associate and instructor. In 1929 he was appointed Professor of Surgery at the Duke University School of Medicine; since the opening of the hospital in 1930 he had had charge of the surgical department. Dr. Hart is the author of a large number of publications for medical journals.

Time: Thursday, February 12, 4:00 P.M.

Subject: Treatment of the Ruptured Appendix with Immediate and with Delayed Operation.

DR. HOWARD FRANCIS KANE

Washington, D. C.

Professor of Obstetrics and Gynecology, Washington University School of Medicine since 1932. Dr. Kane was born at Machias, Me., May 14, 1887. He was graduated from Worcester Academy, 1905; A.B. degree Bowdoin, in 1909; M.D., Washington University, 1912. Member of house staff successively of George Washington Children's, Columbia hospitals, Washington, D. C., and New York Lying-in

Hospital, 1912-1916; member teaching staff George Washington University School of Medicine since 1916; Dr. Kane served as first lieutenant and captain of the Medical Corps in the U. S. Army with the B.E.F., 1917-19; major in Medical Reserve Corps, U. S. Army, 1919-28; Lieutenant Commander U. S. Naval Reserve since 1937; Decorated Military Cross (British) in 1917. Dr. Kane is a fellow of American College of Surgeons, International College of Anesthetists; American Ass'n. of Obstetricians, Gynecologists and Abdominal Surgeons. He has contributed many articles to medical journals.

Time: Friday, February 13, 9:00 A.M.

Subject: The Treatment of Acute and Chronic Osteomyelitis.

DR. E. KENNER~~R~~LY MARSHALL, JR.

BALTIMORE, MD.

Professor of Pharmacology and Experimental Therapeutics, the Johns Hopkins Medical School, Baltimore, since 1932. Dr. Marshall was born in Charleston, S. C., May 2, 1889. Received his B.S. degree from the College of Charleston in 1908; Ph.D., Johns Hopkins University, 1911, M.D., Johns Hopkins Medical School, 1917; LL. D., College of Charleston, S. C., 1941. He is the author of many publications.

Time: Friday, February 13, 10:00 A.M.

Subject: Sulfanilylguanidine as a Chemotherapeutic Agent in Intestinal Infections.

J.ohn ALBERT KEY

ST. LOUIS, MO.

Clinical Professor of Orthopedic Surgery, Washington University School of Medicine, St. Louis, Missouri. Visiting Surgeon to Barnes, Jewish, St. Louis Children's, St. Louis City Hospitals and to Shriners' Hospital for Crippled Children.

Born, Jackson, Mississippi, 1890. B.S. Alabama Polytechnic Institute, 1913. M.D., Johns Hopkins Medical School, 1918. Instructor Anatomy, Creighton, 1915-16. Lieutenant M.C., 1917-19. Resident House Officer, Children's Hospital, Boston. 1919-20; Massachusetts General Hospital, 1920-22. Instructor Applied Physiology, Harvard, 1921-22. Orthopedic Surgery, Maryland, 1922-24. Research Department of the Shriners' Hospitals for Crippled Children, St. Louis, 1925-1931. Clinical Professor of Orthopedic Surgery, Washington University School of Medicine since 1931.

Time: Friday, February 13, 11:00 A.M.

Subject: The Treatment of Acute and Chronic Osteomyelitis.

DR. CLIFFORD J. BARBORKA

CHICAGO, ILL.

Assistant Professor of Medicine, Northwestern University Medical School and Attending Physician of the Passavant Memorial Hospital. Dr. Barborka received his B.S. degree in 1916 from the University of Chicago, and M.D. from Rush Medical College in 1920. He served as consulting physician at the Mayo Clinic 1921 to 1932. He is director of the Abbott Medical Research Foundation of Northwestern University Medical School; consulting gastroscopist for Edward Hines Memorial Hosp. He is the author of *Treatment by Diet,* now in the fourth edition.

Time: Friday, February 13, 2:00 P.M.

Subject: Medical Management of Gallbladder Diseases.

DR. JOHN J. PEMBERTON

ROCHESTER, MINN.

Dr. Pemberton was born on May 3, 1887, at Wadesboro, North Carolina. He received the degree of B. A. in 1907 from the University of North Carolina, M.D. in 1911 from the University of Pennsylvania, M.S. in Surgery in 1918 from the University of Minnesota, and LL.D. in 1932 from the University of North Carolina. He came to the Mayo Clinic, Rochester, Minnesota, as a fellow in surgery in May, 1913. He was appointed assistant in surgery July 1, 1914, first assistant in 1916 and attending surgeon and head of a section in surgery, the Mayo Clinic, on January 1, 1918, which position he now holds. He is professor of surgery, The Mayo Foundation. He has contributed numerous articles to medical and surgical journals.

Time: Friday, February 13, 3 P.M.

Subject: Malignant Lesions of the Colon and Rectum.

RECOMMENDATIONS TO ALL PHYSICIANS

(Continued from page 462)

time at the discretion of the Secretary of the Navy. Temporary deferments may be granted only upon approval of applications made to the Surgeon General of the Navy.

All men in this category who do not hold commissions should enroll with the Procurement and Assignment Service. The Procurement and Assignment Service under the Executive Order of the President is charged with the proper distribution of medical personnel for military, governmental, industrial, and civil agencies of the entire country. All those so enrolled whose services have not been established as essential in their present capacities will be certified as available to the Army, Navy, governmental, industrial, or civil agencies requiring their services for the duration of the war.

V. *All Physicians Under Forty-five*

All male physicians in this category are liable for military service and those who do not hold commissions are subject to induction under the Selective Service Acts. In order that their service may be utilized in a professional capacity as medical officers, they should be made available for service when needed. Wherever possible, their present positions in civil life should be filled or provisions made for filling their positions, by those who are (a) over 45, (b) physicians under 45 who are physically disqualified for military service, (c) women physicians, and (d) instructors and those engaged in research who do not possess an M.D. degree whose utilization would make available a physician for military service.

Every physician in this age group will be asked to enroll at an early date with the Procurement and Assignment Service. He will be certified for a position commensurate with his professional training and experience as requisitions are placed with the Procurement and Assignment Service by military, governmental, industrial or civil agencies requiring the assistance of those who must be dislocated for the duration of the national emergency.

VI. *All Physicians Over Forty-five*

All physicians over 45 will be asked to enroll with the Procurement and Assignment Service at an early date. Those who are essential in their present capacities will be retained and those who are available for assignment to military, governmental, industrial or civil agencies may be asked by the Procurement and Assignment Service to serve those Agencies.

The maximal age for original appointment in the Army of the United States is 55. The maximal age for original appointment in the Naval Reserve is 50 years of age.

All inquiries concerning The Procurement and Assignment Service should be sent to The Executive Officer, 5654 Social Security Building, 4th and Independence Avenues, SW, Washington, D. C., and not to individual members of the Directing Board or of committees thereof.

DeSOTO COUNTY

At a recent meeting of the DeSoto County Medical Society the following officers were elected for the year: president, Dr. Charles Whitley Emerson, of Hernando; vice-president, Dr. John M. Wright, of Hernando; secretary-treasurer, Dr. Lancelot L. Minor, of Route 4, Memphis, Tennessee; censors, Drs. Denver C. Funderburk, of Olive Branch, W. Arthur Vandergrift, of Hernando, and Albert Vernon Richmond, of Lake Cormorant. Delegate to the state association will be chosen later. This good society convenes the first Monday of January, April, July and October. It has one hundred per cent regular practitioners as members. There are in the county two doctors totally retired and one semi-retired.

Dr. Angus Leslie Emerson, of Hernando, is the oldest member and continues to be active in all good works.

John Marion Wright, Jr., has just been commissioned second lieutenant in the Army Air Service, U. S. A.

Mississippi State Medical Association

Organized 1867 **Next Meeting: May 12, 13, 14, 1942, Jackson**

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President-Elect—H. Lowry Rush, Meridian
Vice-Presidents—B. B. O'Mara, Biloxi
H. C. Sheffield, Biloxi
T. H. Rayburn, Pontotoc

Secretary—T. M. Dye, Clarksdale
Editor—Lawrence W. Long, Jackson
Historian—Leon S. Lippincott, Vicksburg
Speaker—J. Rice Williams, Houston
Treasurer—E. Leroy Wilkins, Clarksdale

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Second District—L. L. Minor, Rt. 4, Memphis, Tenn.
Third District—R. B. Caldwell, Baldwyn
Fourth District—J. K. Avent, Grenada
Fifth District—Lawrence W. Long, Jackson
Sixth District—Lamar Arrington, Meridian
Seventh District—J. P. Culpepper, Hattiesburg
Eighth District—W. H. Frizell, Brookhaven
Ninth District—D. J. Williams, Gulfport

COMMITTEES

Public Policy and Legislation:

Felix J. Underwood, Jackson
Henry Boswell, Sanatorium
W. H. Anderson, Booneville

Budget and Finance:

J. P. Wall, Jackson
J. B. Howell, Canton
J. S. Hickman, Meridian

Constitution and By-Laws:

H. Lowry Rush, Meridian
W. H. Frizell, Brookhaven
W. W. Crawford, Hattiesburg

Exhibits:

Dr. D. W. Jones, Jackson
Dr. Leon S. Lippincott, Vicksburg
Dr. W. H. Anderson, Booneville

COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	D. W. Hamrick, Corinth	R. H. DeJarnette, Corinth	Third Friday, 6:30 p.m.
Amite	D. H. Thornhill, Crosby	W. T. Thornhill, Crosby	Second Thursday 7:30 p.m.
Central Medical	W. E. Noblin, Sr., Jackson	H. C. Ricks, Jackson	First Tuesday 7:30 p.m. Omit July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. P. Walker, Marks	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	C. H. McCall, Gulfport	D. L. Hollis, Biloxi	
Delta Medical	J. D. Simmons, Cleveland	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	C. W. Emerson, Hernando	L. L. Minor, Memphis, Rt. 4	First Mon. Jan., Apr., Jul., Oct.
East Mississippi	W. R. Hand, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	Stanley A. Hill, Corinth	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	E. M. Givens, McComb	T. Paul Haney, Jr., McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	S. E. Fields, Centerville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Eye—Alston Callahan, Vicksburg.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H, Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

DERMATOLOGY

HYPOSENSITIZATION TO POISON IVY. Bedford Shelmire, M.D., Dallas, Texas, Archives of Dermatology and Syphilology, Vol. 44, Number 6, December 1941.

This paper is of exceptional value in that it deals with the desensitization of persons to plants of the rhus family which are almost universal irritants.

Attempts at desensitization have been made for a number of years by using commercial extracts intramuscularly with more or less success, frequently with less success.

Doctor Shelmire proved the strength of his extracts by use on hypersensitive and hyposensitive controls because there is no chemical means of assaying the potency of poison ivy extracts. Twenty persons sensitive to poison ivy were given one ounce of a 1 to 25, or 1 to 10 dilution of poison ivy leaf or root oleoresin in corn oil. Pre-treatment and post-treatment quantitative patch tests demonstrated that varying degrees of reduction of cutaneous sensitivity of the skin occurred in untreated controls. The results of oral therapy paralleled those usually attained in the precutaneous treatment of asthma and hay fever, satisfactory clinical results being attained in some cases and unsatisfactory results in others. Clinical exposures and repeated testing of the skin with dilution of the oleoresin in corn oil did not result in an increase in the level of cutaneous sensitivity of the majority of those hyposensitized by oral therapy.

The idea of desensitization to poison ivy by oral administration of the leaves or parts of the plant is not new, but the execution of this idea has not received widespread acceptance due to the inability of the doctors to procure stable and potent extracts of the plant, and due to the length of time required to desensitize the patient. This required a great deal of persistence on the part of the patient, and it has been found by some doctors that this is the one thing that a great number of patients are short in. It occurs to the author in commenting on this method of treatment that it should be just as satisfactory to pulverize the dried leaves of the rhus plant and administer them in increasing amounts to the patients, starting, of course, with a very small dose and building up gradually. One may expect to get some pruritic ani in some cases treated by the oral administration of the extracts and would be almost certain to get irritation of the mouth and lips if the irritant were not administered in capsules.

EYE

EVALUATION OF RECENT THERAPEUTIC AGENTS IN OPTHALMOLOGY by E. L. Goar, M.D.—Transactions, American Academy of Ophthalmology and Otolaryngology, Sept. - Oct. 1941 p. 19.

This excellent summary of drugs, vitamins and vaccines is very thorough and gives the essayist's experience with them.

CYCLOPLEGICS AND MYDRIATICS: Paredrine is the only drug recently added and is efficient when combined with homatropine. It has the property of causing a wide dilatation of the pupil and good cycloplegia with a minimum number of drops, which is of considerable advantage to patient and office assistance. The cycloplegia does not last as long as it does by the old method, but its disadvantage is that it causes such a complete mydriasis that the retinoscopist is likely to read a small cylinder which does not belong there.

MIOTICS: Two important miotics are prostigmin and mecholyl. The former has an action similar to that of eserine and is a powerful miotic, and the eye does not become sensitive to it; the latter is described by Clark as a drug that is a synergist to prostigmin and that instillation of a 20 per cent solution at 10 minute intervals, or retrobulbar injection of 0.02 gm. will reduce the tension temporarily in acute glaucoma and thus prepare the eye for safe operation.

VASOCONSTRICTORS: Supra-renin bitartrite (2%) ointment, suggested by John Green, is as efficient as the glaucosan preparations in Germany, but like all vasoconstrictions which lower the tension, they are dangerous because acute glaucoma may follow their use.

VASODILATORS: Acetylcholine, the nitrates, and padutin are suggested in the literature, but doubt is expressed on their value in ophthalmology.

FOREIGN PROTEINS: The general results from autogenous vaccines to build up resistance to specific organisms has been disappointing. The essayist has used autogenous vaccines with considerable success in treating cases of recurring hordeolum, but with much less success in treating cases of blepharitis and meibomitis.

SULFONAMIDES: Ophthalmologists have reason to be grateful for this specific in trachoma and gonorrheal conjunctivitis; and it is of great aid in inclusion blennorrhoea, certain types of corneal ulcer, and pneumococcic conjunctivitis.

THYROXIN: This drug, widely used as treatment for cataracts by charlatans, has proved without beneficial effect.

HEPARIN: This anticoagulant offers some hope in thrombosis of the central vein, provided it can be administered quickly after obstruction has occurred.

HYPERTONIC SOLUTIONS: The essayist has had excellent results from slowly injecting 50 cc. of 50% sucrose one hour before operation, which serves to prevent retinal and choroidal hemorrhages which are likely to occur from friable vessels upon sudden lowering of tension at operation.

VITAMINS: This subject is so wide and changes so rapidly the ophthalmologist can hardly remember the names. Fortunately for him, comparatively few vitamins are of proved benefit in diseases of the eye. Retinas that are low in vitamin A content do not regenerate visual purple readily, hence light adaptation is slow and incomplete.Cordes and Harrington have found that the symptoms associated with vitamin A deficiency have stood the test of time but the biophotometer test is not nearly so reliable as formerly thought, as many patients with normal readings show symptoms and improve greatly on vitamin therapy.

Vitamin B complex has proved itself of value in amblyopia caused by alcohol and tobacco and possibly in retrobulbar neuritis due to other causes. The essayist's experience in treating vascularization of the cornea with riboflavin has been small but unfavorable. Vitamin C has been recommended to cause healing of sluggish corneal lesions, but no real efficiency has been brought forward, and the same observation is true with respect to vitamin K for retinal hemorrhages and vitamin D in control of myopia.

THE HYPERTHERM: The place of artificially induced fever therapy in ophthalmic diseases has not been determined, but it will probably not occupy a large niche in opthalmic therapeutics.

BETA RADIUM RAYS: These have been used in the treatment of tuberculosis of the anterior segment of the eye, but this method of treatment will not be widely used because few institutions have a large enough supply of radium to furnish the necessary amount of radon, and since radon loses its strength so rapidly, a patient must travel to an institution where radium is available to receive treatment.

EAR, NOSE AND THROAT

TECHNIQUE OF STAINING NASAL SMEARS

Allergy of The Upper and Lower Respiratory Tracts In Children, French K. Hansel, M.D., Annals of Oto., Rhinol. and Laryng., Vol. 49, No. 3, P. 590.

The increasing interest manifested in nasal allergic conditions is resulting in more frequent cytologic study of the nasal secretions. Most investigators have been using the Wright stain though some have been using the Giemsa stain. In the above article, Hansel published a new technique for staining nasal smears recommending it as superior to either.

For the benefit of those interested, the technique is as follows:

"The stain should be certified by the Commission of Standardization of Biological Stains. The National Aniline and Chemical Company makes good stains and pure methyl alcohol.

The methyl alcohol should be fresh and the prepared stains should not be kept more than two months.

PREPARATION OF STAINS

Eosin—Dissolve 0.30 gm. of eosin in 60 cc. of methyl alcohol (National Aniline). 1-200 solution.

Methylene Blue—Dissolve 0.30 gm. of methylene blue in 60 cc. of methyl alcohol. 1-200 solution.

TECHNIQUE OF STAINING

1. The secretions should be well teased out on the side so as not to be too thick.
2. Dry in air or gently over flame.
3. Draw a mark in front of label with paraffin pencil to prevent soiling of label.
4. Stain for one minute with the eosin solution, 1-200.
5. Add distilled water, enough to take up the staining solution and to cover the slide completely, as in the Wright technic. Allow to stand for one minute. Then drain off and flood with distilled water until all free stain is removed. Flood with 95 per cent ethyl alcohol and drain off. Then immediately,
6. Stain with methylene blue solution, 1-200, for ten seconds. Add distilled water to cover slide as above and let stand thirty seconds. Then remove excess stain with distilled water and finally the ethyl alcohol as above. If the neutrophiles do not stain well, restain with the methylene blue as above. If the secretion is thick and tenacious and there is a large number of neutrophiles, they may not completely stain. They may therefore show a pink color, in which case they should not be mistaken for eosinophiles. Diffuse uniform pink areas in thick secretion usually indicate incomplete methylene blue staining.

If the mucus or the neutrophiles are too intensely blue, excess stain may be removed by flooding the slide with a weak acid solution; one drop of 1 per cent hydrochloric acid to one ounce of distilled water. The solution should be left on for only a moment, then quickly poured off. Then flood the slide with pure distilled water and finally the ethyl alcohol.

The eosinophiles will stain with a brilliant red cytoplasm with easily recognizable granules and the nucleus will stain blue. The neutrophiles and epithelial cells will stain with a deep blue nucleus and lighter blue cytoplasm. The mucus will stain blue. In general the intensity of the stains may be controlled by varying and concentration of the stains or the time element.

EXAMINATION OF SMEARS

Thick, grossly visible areas on the slide may be examined first with low power and then with high power or oil immersion. For the most satisfactory interpretation of cytologic pictures a magnification of 125 to 150 should be used. With these magnifications the cells can be readily recognized and yet one has the advantage of viewing the largest possible field. Interpretation depends upon determining the numbers and proportions of cells present. With the above magnification the field will be about 1 mm. in diameter. For high power examination balsam and a cover slip should be applied.

INTERPRETATION OF SMEARS

In the interpretation of the cytology of the secretions, one must take into consideration the type and quantity of secretion in the specimen and correlate the findings with the clinical history and nasal changes. The clinical type of allergy under consideration and the possible relationship of acute and chronic infection must always be evaluated. An appreciation of the significance of the cytology of secretion can be accomplished only by individual experience, and then only after the examination of many hundreds of specimens. If this work is done by a laboratory or by a technician, the clinician sacrifices the real value of the cytologic findings, for individual interpretation must be correlated with all the clinical facts.

In the inspection of a smear, one containing only eosinophiles, for instance, it will be noted that the cells are irregularly distributed. Sometimes they are scattered, arranged in clumps or arranged in streaks. When mixed with neutrophiles, they may likewise be irregularly distributed. Only certain parts of the slide may show significant areas. It is not unusual, for instance, to find a slide completely covered with neutrophiles except in certain small areas where eosinophiles are clumped in masses.

In recording the cytologic findings, the question arises as to what percentage of eosinophiles constitutes a diagnostic number. In view of the irregularity of distribution, it is quite impossible to make an accurate evaluation in terms of percentages. One can learn only by individual experience how to evaluate the cytology. In making a record of the cytologic findings on the history, the best method is the use of the terminology, as commonly employed in recording the results of skin tests. We have adopted the plan, therefore, of recording the cytologic findings in terms of plus-minus, 1—, 2—, 3—, and 4+ eosinophiles and neutrophiles. Although many epithelial cells may be noted in specimens, we have attached no definite significance to them. In using this plan of recording the cytology, due consideration must be given to the type of specimen under examination. A scanty amount of secretion may show a small but significant number of eosinophiles, while a good specimen may show a four-plus number.

The presence of large numbers of eosinophiles in the secretions during quiescent, apparently symptom-free periods, indicates that mild reactions may occur in the mucous membrane without definite symptoms. Patients, therefore, with almost symptom-free seasonal and nonseasonal allergy and with symptom-free asthma may show eosinophiles in the nasal secretions at all times. During quiescent periods, between exacerbations, a large percentage will show no typical changes in the nasal mucous membrane. The membrane may appear quite normal.

In secretion containing both eosinophiles and neutrophiles, the latter represent superimposed acute or chronic infection. In evaluating the numbers of neutrophiles in the secretion, one may take into consideration that the neutrophilic response is always greater than the eosinophilic response and that the number of neutrophiles usually outnumbers the eosinophiles about 10 to 1. A plus-minus or a one-plus number of neutrophiles represents about ten times as many eosinophiles. In a smear with four-plus neutrophiles, the field is completely covered with them.

1. Allergic Rhinitis, Fletcher D. Woodward, M.D. and Oscar Swineford. M.D. Archives of Otolaryngology, Vol. 34, No. 6, Page 1123.
2. Diagnosis Of Allergy Of The Nose and Paranasal Sinuses, French K. Hansel, M.D., Archives of Otolaryngology, Vol. 34, No. 6, Page 1152.

The above papers were presented before the Section on Laryngology, Otology and Rhinology at the recent meeting of the A.M.A. in Cleveland and discussed by Drs. Graft Tyler Brown of Washington, J. Alexander Clarke, Jr. of Philadelphia, T. C. Galloway of Evanston and George Piness of Los Angeles. The papers and discussions were published in the December 1941 issue of Archives of Otolaryngology.

While commenting on the interest that has been aroused in allergy during recent years Swineford reminds us that "in 1936 there were actually no allergists or allergy clinics in 14 of the recognized schools of this country. In 22 schools the instruction in allergy was decidedly haphazard."

Both papers review the typical and atypical symptoms of allergic rhinitis. Hansel, in his usual manner, reviewed a large number of papers on the subject of nasal allergy and presented briefly 15 case reports. Woodward and Swineford presented an analysis of 128 cases in which the rhinologist and allergist collaborated. They very aptly state "a considerable number of the patients seen by the rhinologist have allergic rhinitis. It seems axiomatic that such patients ought to be treated by methods currently employed by the allergist. To treat them thus the rhinologist should familiarize himself with acceptable allergic practices or he should collaborate with an allergist. To ignore, ostrich like, the presence of allergy or to attempt to treat the rhinologic manifestations of allergy by orthodox rhinological procedures, is indefensible. Conversely it is equally indefensible for the allergist to ignore the necessity for orthodox rhinologic treatment of those allergic patients who present one or more of several complications of allergic rhinitis."

All agreed that the history is of major importance and must be taken with care and in great detail. Woodward and Swineford state "when the findings are not typical, the following statements by patients are highly suggestive of allergic rhinitis: 'I take one cold after another,' 'I keep a cold all of the time,' 'I will sneeze if you look at me,' 'I take a cold when I sit in a draft,' 'get caught in the rain' or 'get chilled.' Early observations suggesting allergic rhinitis in a patient with nasal symptoms are, absence of malaise, easy fatigue, fever or purulent discharge with colds; a preponderance of symptoms during one part of the day and relative comfort at other times; recovery from a 'cold' in one or two days; habitual rubbing of the nose or eyes, chronic nasal symptoms with other obvious causes.

Woodward and Swineford feel that nasal smears for eosinophils are seldom necessary if the history and examination are properly evaluated. On the other hand, Hansel apparently feels that it is of major importance, reporting one case in which it was necessary to examine the nasal secretion 12 times before an eosinophilia was found. Brown also added "blood eosinophilia and a lower sedimentation supply additional evidence of allergy."

Woodward and Swineford are of the opinion that, "the chief function of the allergist is to identify and then to protect the patient from the effects of offending allergens. There are two chief methods at his command; the history of the allergy and skin testing. At times he also uses various eliminative procedures, conjunctival and nasal insufflation tests and thermal tests for physical allergy."

Both papers discuss the problem of indicated surgery in allergic conditions. Hansel's states, "Although there are definite indications for tonsillectomy in a great many patients with respiratory allergy, this operation should not be performed primarily for the relief of allergic symptoms." Woodward and Swineford discuss the subject in more detail and recommend that "in general we feel that a period of allergic management plus conservative rhinologic treatment should precede major surgical intervention. In those few patients with a history of long standing severe asthma, bronchiestasis, and surgical and roentgenologic evidence of chronic sinus infection, little is to be gained by the postponement of surgical intervention. When a major surgical operation is necessary it should be complete enough to effect a cure and the complications which necessitated it."

It is of further interest that Hansel refers to cases of impaired hearing due to allergic nasal conditions, pointing out that such cases are often subjected to nasal surgery without relief of symptoms.

PEDIATRICS

Intradermal Immunization. Diphtheria—Maurice L. Blatt, Seymour Fisher, and David W. Van Gelder—American Journal of Diseases of Children, 62:757 (October) 1941.

This study was carried out "in order to determine the effectiveness of active immunization against diphtheria by the intradermal administration of diphtheria toxoids."

"Of 945 children, ranging in age from 1 day to 19 years, who were given Schick tests, 228 reacted positively.

"By the use of either alum-precipitated toxoid or plain toxoid, given intracutaneously, a high percentage of negative Schick reactions was produced.

"Ninety-three children were given a single injection of 0.1 cc. of alum-precipitated toxoid intradermally. Forty-eight were retested at the end of six weeks, and of these 7 (15 per cent) showed persistently positive Schick reactions. Eleven months after immunization 4 of these children still had positive Schick reactions.

"Thirty-eight children were given doses of alum-precipitated toxoid intradermally. Thirty-six were rested, and all (100 per cent) had negative Schick reactions at the end of 11 months.

"Twenty children were given two doses of 0.2 cc. each of alum-precipitated toxoid intradermally three weeks apart. Three children showed positive Schick reactions nine months later. Sixteen months after immunization Schick retests revealed that 1 (5 per cent) of the children still had a positive reaction.

"Of 77 children who were given two doses of 0.1 and 0.2 cc., respectively of plain toxoid intracutaneously at an interval of three weeks, 1 had a positive reaction to the Schick test after nine months. Sixteen months after the last inoculation, 2 (2.6 per cent) of the children had positive Schick reactions.

"Unmodified toxoid produced less severe local reactions than alum-precipitated toxoid when injected intradermally and, therefore was more acceptable to the children.

"The preferred method of diphtheria immunization is the intradermal injection of two doses of 0.1 and 0.2 cc., respectively, of unmodified toxoid (Ramon's anatoxin) at an interval of three weeks, followed by a third injection if the Schick reaction is still positive."

COMMENT

The suggestions offered in this article for the administration of diphtheria toxoid are well worth a trial.

—H. F. G.

State Board of Health

Felix J. Underwood, M.D.

MISSISSIPPI STATE BOARD OF HEALTH CIVILIAN DEFENSE IMPORTANT TO PUBLIC HEALTH

The nation is at war and physicians, public health workers and others are pledging their full resources and skills to help preserve our American way of life and to avenge the wrongs that have been inflicted upon all freedom loving peoples. Realizing that the ultimate success of the all-out war effort for America depends upon maximum physical fitness of both military and civilian populations, the health and medical forces of the country are busy with preparations which will insure maintenance of a high level of health and efficiency.

The Health, Welfare, and Consumer Interest Division of the Mississippi Civilian Defense Council has chairmen functioning in every county and is getting ready for any emergency services which may be required for civilian protection. Dr. Felix J. Underwood, chairman of this division, announces the following subcommittee chairmen for the state:

Local chairmen of Health, Welfare and Consumer Interest for Mississippi are as follows:

MEDICAL	Dr. Augustus Street	Vicksburg
HOSPITALIZATION	Dr. B. D. Hansell	Okolona
SANITATION	Mr. H. A. Kroeze	Jackson
FOOD	Miss Ethel Payne	Jackson
CLOTHING	Mrs. C. C. McDonald	Bay St. Louis
SUPPLY AND PRICE CONTROL	Col. Alexander Fitzhugh	Vicksburg
PUBLIC ASSISTANCE	Mr. W. F. Bond	Jackson
RECREATION	Mrs. Sperry Cole	New Albany

Local chairmen of Health, Welfare and Consumer Interest for Mississippi are as follows:

County	*Chairmen*	*Town*
Adam	Dr. A. L. Adam	Natchez
Alcorn	Dr. R. H. DeJarnette	Corinth
Attala	Dr. C. A. Pender	Kosciusko
Benton	Dr. A. A. Aden	Ripley
Bolivar	Dr. R. D. Dedwylder	Cleveland
Calhoun	Dr. F. L. McGahey	Calhoun City
Carroll	Dr. M. E. Arrington	Vaiden
Chickasaw	Dr. J. R. Williams	Houston
Choctaw	Dr. J. James	Ackerman
Claiborne	Dr. W. N. Jenkins	Port Gibson
Clay	Dr. J. E. Ellis	West Point
Coahoma	Dr. Guy R. Post	Clarksdale
Copiah	Dr. J. C. McGuire	Hazlehurst
Covington	Miss Grace McCool	Collins
DeSoto	Dr. Arthur Vandergrift	Hernando
Forrest	Dr. B. D. Blackwelder	Hattiesburg
Franklin	Dr. J. C. McGehee	Bude
George	Dr. E. H. West	Lucedale
Grenada	Dr. R. A. Clanton	Grenada
Hancock	Dr. C. M. Shipp	Bay St. Louis
Harrison	Mr. Davis Cottrell	Gulfport
Hinds	Mr. Henry Sargent	Jackson
Holmes	Dr. L. H. Eubanks	Lexington
Humphreys	Dr. J. W. Barkley	Belzoni
Issaquena	Dr. B. A. Stafford	Rolling Fork
Itawamba	Dr. J. T. Senter	Fulton
Jasper	Dr. W. F. Bell	Bay Springs
Jefferson	Dr. S. R. Towns	Union Church
Jefferson Davis	Dr. E. J. Holder	Prentiss

Jones	Dr. T. Paul Haney	Laurel
Kemper	Dr. V. M. Creekmore	DeKalb
Lamar	Mrs. R. I. Martin	Purvis
Lauderdale	Dr. N. C. Knight	Meridian
Lawrence	Mrs. Ollie May Stewart	Monticello
Leake	Dr. W. S. Martin	Carthage
Lee	Dr. W. H. Cleveland	Tupelo
Leflore	Dr. R. J. Jones	Greenwood
Lincoln	Dr. W. R. May	Brookhaven
Lowndes	Dr. J. H. White	Columbus
Madison	Dr. J. H. Hines	Canton
Marion	Dr. C. C. Thompson	Columbia
Monroe	Dr. C. H. Love	Aberdeen
Montgomery	Dr. E. C. O'Cain	Winona
Neshoba	Dr. W. J. Stribling	Philadelphia
Newton	Dr. Z. C. Hagan	Union
Noxubee	Dr. G. E. Gibbons	Macon
Oktibbeha	Dr. J. F. Eckford	Starkville
Panola	Dr. G. H. Wood	Batesville
Pearl River	Dr. R. L. Simmons	Poplarville
Perry	Mrs. J. T. Carley	Richton
Pike	Dr. S. J. Williams	McComb
Pontotoc	Dr. R. P. Donaldson	Pontotoc
Prentiss	Dr. J. C. Powell	Booneville
Quitman	Dr. A. C. Covington	Marks
Rankin	Dr. W. H. Watson	Brandon
Sharkey	Dr. B. A. Stafford	Rolling Fork
Simpson	Dr. J. G. Egger	Mendenhall
Smith	Dr. W. F. Bell	Bay Springs
Stone	Dr. S. E. Dunlap	Wiggins
Tate	Dr. H. H. Rutledge	Senatobia
Tippah	Dr. A. A. Aden	Ripley
Tishomingo	Dr. W. R. Armstrong	Iuka
Tunica	Dr. T. K. Chandler	Tunica
Union	Dr. R. H. Bostwick	New Albany
Walthall	Dr. J. J. Pittman	Tylertown
Warren	Dr. F. Michael Smith	Vicksburg
Washington	Mr. O. H. Beck	Greenville
Webster	Dr. W. H. Curry	Eupora
Wilkinson	Dr. Charles Catchings	Woodville
Winston	Dr. M. L. Montgomery	Louisville
Yalobusha	Dr. R. J. Criss	Coffeeville

Duties of the local Chief of Emergency Medical Services

In order to expedite the organization of the Emergency Medical Services and provide for their effective administration, it is important that each local Civilian Defense Council appoint without delay a local Chief of Emergency Medical Services.[1] He should be an outstanding medical leader and should be selected in consultation with the State Defense Council, the local medical society, and the local health officer. To facilitate the integration of all local medical resources into a comprehensive program for civilian protection, the local Chief of Emergency Medical Services should be assisted by a Medical Advisory Council, consisting of the local health officer, an experienced hospital executive, and representatives of the local medical society, the local nursing profession, the American Red Cross, and any participating voluntary agencies.

Under the administrative authority of the local Director of Civilian Defense, the duties of the local Chief of Emergency Medical Services have been outlined as follows:

1. To determine the scope of the activities of all official and voluntary organizations which are to participate in the emergency medical program of civilian defense, to integrate these organizations into the comprehensive local program, and to assist them in expanding their activities to the limit of their resources in personnel and equipment.

2. To assist hospitals in the locality to organize, equip and train Emergency Medical Field Units as outlined in Medical Division Bulletin No. 1, "Emergency Medical Service for Civilian Defense."

3. To inspect and select sites for the establishment of Casualty Stations.

4. To make a spot map of the locality, indicating the locations of hospitals, appropriate sites for Casualty Stations, depots for storage of stretchers, blankets and collapsible cots, and

the locations of rescue squads. The map should indicate the number of Emergency Medical Squads in each hospital. Copies of the map should be supplied to Control Centers, Police and Fire Departments, Health Department, local Red Cross Chapter, State Defense Council, Regional Director, Regional Medical Officer and to all coöperating hospitals.

5. To plan and establish adequate transportation service for casualties and medical personnel in consultation with local government departments, American Red Cross and voluntary agencies.

6. To arrange with the local Control Authority for field drills of Emergency Medical Units and Rescue squads in collaboration with police and fire auxiliaries, disaster relief and canteen services of the American Red Cross, ambulance transport service and other civilian defense units and to supervise such drills.

7. To make an inventory of hospital beds in the locality and of the possibilities for emergency expansion in bed capacity.

8. To assist the authorities charged with preparing plans for evacuation in making an inventory of hospitals, convalescent homes, sanatoria, hotels and other structures within a radius of fifty to one hundred miles which might be used as base hospitals to which patients in city institutions could be evacuated.

9. To assist the local Central Volunteer Bureau in establishing courses for volunteers in the field health, medical care, nursing and related activities.

10. To stimulate recruitment of volunteers for Nurses' Aid courses of the American Red Cross, assist the local Red Cross chapter in establishing Training Centers for Volunteer Nurses' Aides at appropriate hospitals and assist the Red Cross placement bureau in placing Nurses' Aides with hospitals, clinics, health departments and field nursing services after completion of training.

11. To stimulate and guide extension of First Aid training courses as widely as possible among the local population through the American Red Cross and other voluntary agencies.

12. To stimulate and guide industrial plants, business establishments and government bureaus in the locality in the training and organization of effective First Aid Detachments among the employees.

13. To collaborate with state and local health departments and through them with the Regional Sanitary Engineer in a comprehensive program for the protection of the community against emergency sanitation hazards.

14. To collaborate with local and State Defense Councils, Office of Civilian Defense, Federal Security Agency, Children's Bureau and other local, state and federal authorities in the preparation of plans for evacuation, with particular attention to the medical needs of the population under such circumstances.

15. To keep the community and particularly the members of the health and medical professions and the participating official and voluntary organizations informed of the plans and activities of the local Emergency Medical Services.

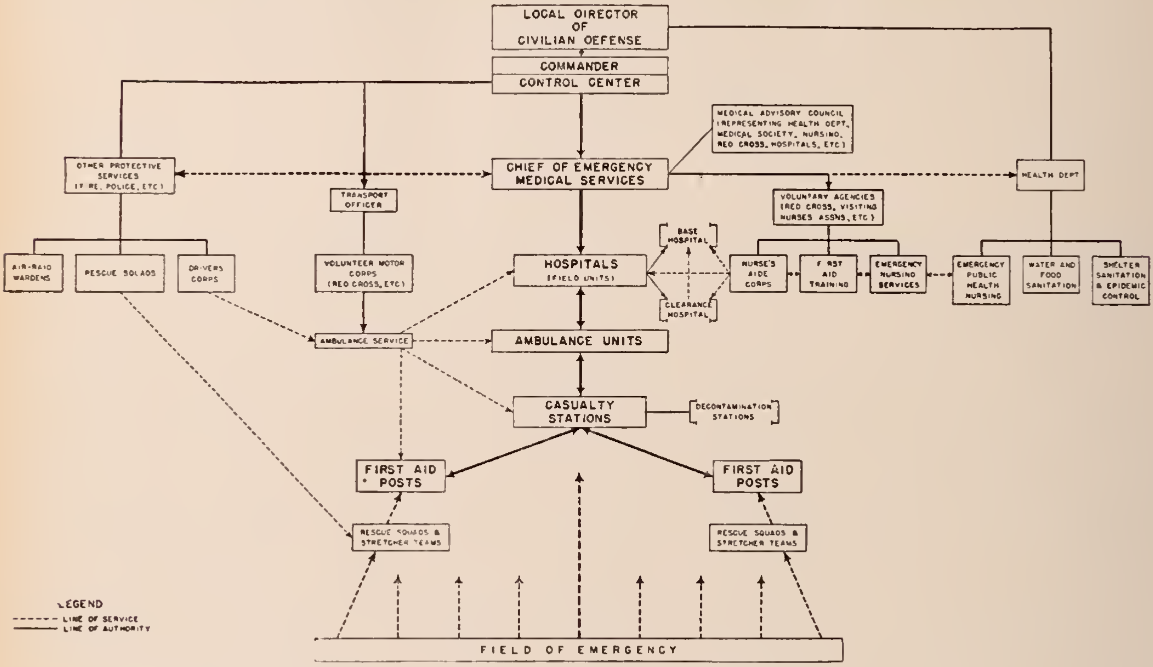
Equipment and Operation of Emergency Medical Field Units[2]

The Office of Civilian Defense at Washington urges that emergency medical field units be established in all approved general hospitals, both voluntary and governmental, located in coastal states and in industrial centers of the interior. The plan of organization and size of the emergency field units for hospitals of various sizes and the total number of field units recommended on a population basis are outlined in Bulletin No. 1 of the Medical Division, Civilian Defense Office.

The emergency medical field units of a hospital are composed of two or more squads, so that at least one squad is on first call during each 12-hour period of the day. In larger hospitals reserve squads should be available at the call of the control center in the event that multiple sites of disaster require the manning of additional casualty stations and first-aid posts. All members of emergency medical field units should be systematically drilled in first-aid procedures. The general adoption of a common pattern in organization and equipment for civilian defense is highly desirable so that adjacent communities may pool or exchange emergency resources in time of need.

It may be advisable to organize physicians and nurses engaged in private practice in the community into reserve emergency field units related to hospitals. In small hospitals whose resident staffs cannot be depleted, the primary emergency unit of a hospital may be made up in whole or in part of practitioners from the community.

ORGANIZATION OF LOCAL EMERGENCY MEDICAL SERVICES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FIRST AID TRAINING
EMERGENCY NURSING SERVICES
EMERGENCY PUBLIC HEALTH NURSING
WATER AND FOOD SANITATION
SHELTER SANITATION & EPIDEMIC CONTROL
CLEARANCE HOSPITAL
AMBULANCE SERVICE
AMBULANCE UNITS
CASUALTY STATIONS
DECONTAMINATION STATIONS
FIRST AID POSTS
FIRST AID POSTS
RESCUE SQUADS & STRETCHER TEAMS
RESCUE SQUADS & STRETCHER TEAMS
LEGEND
LINE OF SERVICE
LINE OF AUTHORITY
FIELD OF EMERGENCY

Casualty Stations

The casualty station will occupy a predetermined site as the clinic of a hospital, health department or voluntary agency, school basement or other suitable place which provides shelter, protection, and accessibility. The work of the Casualty Station is to be limited to emergency first aid procedures—the relief of pain, prevention of shock, control of hemorrhage, care of burns, application of simple splints and of surgical dressings. This will protect hospitals from the burden of minor casualties which would interfere with the work of caring for the seriously injured. The Casualty Station is to be supplied with stretchers, collapsible cots, and blankets from medical depots located at sites from which the transportation of Emergency Medical Service is derived.

The First-Aid Post will occupy a temporary location usually close to the scene of disaster and will: 1. Care for the more severely injured, preparatory to their transfer to a hospital. No surgery other than emergency first aid is contemplated. 2. Classify the casualties so as to expedite the transfer of the seriously injured to a hospital, a most important responsibility which requires surgical judgment. 3 Direct the stream of ambulatory and of slightly injured stretcher patients and those suffering from nervous shock or hysteria to a Casualty Station. 4. Tag all casualties immediately. Maintain entries in Casualty Record Book of all persons receiving first aid. (A nurse or nurse's aide should be responsible for these records.)

EQUIPMENT FOR A FIRST-AID POST

(Working Supply for One Physician's Team)

Item	*No.*
Cases, carrying, waterproof	2
Scissors, surgical, Mayo 5½" curved	1
Scissors, surgical, Mayo 5½" straight	1
Scissors, bandage, angular, 7½"	2
Forceps, hemostatic, Rochester, curved, 6¼"	6
Forceps, hemostatic, Rochester, straight, 5½"	6
Forceps, tissue, spring, 5½"	1
Forceps, tissue, spring, mouse-tooth, 5½"	1
Forceps, tongue holding, 7"	1
Tube, breathing (airway) hard rubber or metal (adult)	1
Tube, breathing (airway) hard rubber or metal (child)	1
Retractor, tissue, double end nested 9" and 10" Army type, pair	1
Syringe, hypodermic, Luer, 2cc.	2
Needles, hypodermic, 25 gauge, ½"	12
Needles, hypodermic, 19 guage, 1½"	6
Tubes, constriction (length 3") for needles	12
Stoppers, tube, constriction for needles	12
Handles, Bard Parker, No. 3	2
Blades, Bard Parker, No. 10, package of 6	1
Suture Material	
Catgut, plain No. 1, tubes, boilable	6
Silk, dermal, medium, 40" strand, package of	6
Needles, suture, catgut, size 1, half-circle, trochar point, Mayo	6

Needles, cutting edge, straight	6
Drugs	
Morphine sulfate syrettes, 0.015 gm.	20
Morphine sulfate syrettes, 0.030 gm.	10
Sulfathiazole, powder, vials, 5 gm.	12
Ointment, ophthalmic, boric acid, 5% tube, 4 gm.	1
Jelly, tannic acid, tube, 45 gm.	2
Alcohol, denatured, ethyl, bottle, 500cc.	1
Ammonia, aromatic spirit, bottle, 60 cc.	1
Sodium bicarbonate	½ ℔
Phenobarbital tablets, 0.03 gm.	100
Caffeine sodium benzoate, ampules, 0.5 gm.	12
Epinephrine hydrochloric, 1:1000	20cc.
Dressings and Bandages	
Compress, gauze, 4" x 4"	100
Compress, gauze, 2" x 2"	200
Pad, surgical, 8" x 100" (Dakin)	25
Bandage, gauze, 2"	24
Bandage, muslin, 4"	24
Bandage, triangular, muslin, 50" x 36" x 36"	24
Cotton, absorbent, roll sterile	2 oz.
Cotton batting, roll	1 ℔
Plaster, adhesive, 2" x 10 yards, roll	2
Miscellaneous Supplies	
Pins, safety, large	48
Splints, basswood	12
Depressors, tongue, wood	24
Applicators, wood	25
Sheeting, rubber (45" x 72")	1
Basins, white enamel, 9" x 6" 1⅞" (one white cover)	2
Stove, gasoline (Coleman)	1
Pencil, indelible	1
Pencil, dermatographic (red)	1
Pads, heating, chemical	4
Pads, heating, refills, chemical	4
Gloves, surgeon's, rubber, size No. 8 (latex), pair	2
Flashlight (two-cell)	1
Battery, dry cell, for flashlight, No. 950	4
Latern, electric, dry-cell type	1
Battery, dry cell, for lantern, No. 6	4
Cups, paper	25
Brush, nail	1
Soap, hand, bar	2
Towels, hand	12
Matches, safety, box	3
Tourniquet, field, web	3
Bag, laundry, small	1
Tags, identification, book of 20	6
Casualty record book	1

Dressings and Bandages	
Compress, gauze, 4" x 4"	200
Compress, gauze, 2" x 2"	400
Pad, surgical, 8" x 10" (Dakin)	50
Bandage, gauze, 2"	48
Bandage, muslin, 4"	48
Bandage, triangular, muslin (50" x 36" x 36")	48
Cotton, absorbent, roll	1 ℔
Cotton, batting, roll	2 ℔
Plaster, adhesive, 2" x 10 yards	4
Miscellaneous Supplies	
Pins, safety, large	100
Splints, basswood	30
Depressors, tongue, wood	100
Applicators, wood	50
Sheeting, rubber (45" x 72")	2
Basins, white enamel, 9" x 6" x 1⅞" (2 with cover)	4
Stove, gasoline (Coleman)	2
Catheter, urethral, F14	4
Pencil, indelible	4
Pencil, dermatographic (red)	4
Pads, heating, chemical	8
Refills, pads, heating, chemical	8
Gloves, surgeon's, rubber, size 8 (latex), pair	4
Lantern, electric, dry cell	2
Batteries, dry cell, lantern, No. 6	12
Cups, paper	50
Brush, nail	2
Soap, hand, bar	4
Towels, hand	24
Matches, safety, package of 12 boxes	1
Tourniquet, field web	6
Bag, laundry, small	2
Tags, identification book (books of 20)	6
Razor, safety	1
Blades, safety razor	12

Equipment for a Casualty Station

(Supplementary supplies for an emergency squad of two or four physicians, nurses, and nursing auxiliaries.)

The medical and surgical equipment for a Casualty Station contains bulky articles such as traction splints which could not be included in the equipment of the First-Aid Post without impairing its mobility. These articles will be issued from the Casualty Station to the First-Aid Posts as the need arises. Casualty Stations are also stocked with dressings, bandages, and drugs from which the supplies of the First-Aid Posts may be replenished. Blood, plasma, and other biological products such as tetanus antitoxin or toxoid may be obtained by Casualty Stations from the parent hospital as needed. They are, therefore, omitted from this list.

Item	No.
Trunk, Army type	1
Traction Splints	
Splint, arm, hinge, Thomas	4
Splint, leg, half-ring, Army type	4
Splint, Thomas, leg, child	2
Splint, arm, Murray Jones, child	2
Suture Material	
Catgut, plain No. 1, tubes, boilable	12
Silk, dermal, medium, 40" strand, package of 12	1
Needles, suture, size No. 1 half-circle, trochar point, Mayo	12
Needles, cutting edge, straight	12
Drugs	
Morphine sulphate syrettes, 0.015 gm.	40
Morphine sulphate syrettes, 0.030 gm.	20
Sulfathiazole, powder, vials, 5 gm.	24
Ointment, boric acid, ophthalmic, 5%, tbue, 4 gm.	2
Jelly, tannic acid, tube 45 gm.	4
Alcohol, denatured, ethyl, 70%	1 quart
Ammonia aromatic spirit, bottle 60 cc.	1
Sodium bicarbonate	1 ℔
Phenobarbital tablets, 0.03 gm.	200
Caffeine sodium benzoate ampoules, 0.5 gm.	24
Procaine hydrochloride tablets, 0.18 gm.	100
Sodium chloride compressed tablets, 1 gm.	100

Identification Tags

The identification tag is to be filled out by the first member of a Rescue Squad, Stretcher Team, or First-Aid Post to reach the casualty. This must be done immediately because the injured may lose consciousness. All the required information should be recorded. Information concerning the name and address of the injured and of the "person to be notified" are important to those anxious to locate the injured person. The place where an unconscious patient was found should be noted as this may be the only clue to his identity.

It is important to record administration of narcotics or application of a tourniquet. Further treatment given at the First-Aid Post or Casualty Station should be indicated on the back of identification tag. Warnings concerning possible internal injury, hemorrhage, skull fracture, etc. should also be noted on the back of the tag to facilitate sorting of patients on arrival at the hospital.

The tag should be affixed securely to the patient and not to clothing which might later be removed.

A set of symbols to indicate necessity for priority treatment has been devised to facilitate sorting of patients at the hospital. These symbols should be drawn prominently on the forehead of the patient at the First-Air Post or Casualty Station with a red pencil.

U=Urgent—requiring priority attention.
TK=Tourniquet.
T=Indicating tetanus antitoxin has been given.
T=Internal hemorrhage.
M¼=Indicating morphine gr. ¼ or
M½=gr. ½ given.

In addition to the identification tag, a Casualty Record Book will also be part of the equipment of each physician's team. A nurse or nurses' aide should be assigned the responsibility for entering a record of every patient seen. This record should include the diagnosis, treatment, and disposition.

REFERENCES

1. Medical Bulletin No. 1, prepared by Office of Civilian Defense, Washington, D. C.
2. Medical Bulletin No. 2, prepared by Office of Civilian Defense, Washington, D. C.

PUBLIC HEALTH NEWS

Miss Esther Thomas, registered technician with the American Society of Clinical Pathologists, has been added to the staff of the State Board of Health to render assistance to the hospitals of the state during the present emergency. She will serve as an advisory technician to the technicians already employed by the hospitals, spending from one to two weeks in each hospital. These services are available without charge, and hospitals interested in getting this assistance should make application to Dr. H. C. Ricks, Director of Laboratories, State Board of Health, Jackson.

Miss Thomas is a graduate of Simmons College of Boston. Following her graduation she served two years as a laboratory technician in the Newton Hospital, of Newton, Massachusetts. She was chief technician of Cambridge Hospital, Cambridge, Massachusetts, for two years and later went back to Newton Hospital to serve as chief technician there. In this position she was supervisor of technicians and was responsible for the instruction of student technicians.

It is planned to offer postgraduate or refresher courses in laboratory technic to technicians showing evidence of interest and ability to profit by such study. These courses will be given at one of the leading universities of the South at no cost to the technician or the hospital. The technician given such training will be expected to return to the hospital. While she is away at school the hospital will be provided with a competent technician by the State Board of Health in order to prevent interruption of hospital laboratory service.

Mississippi State Sanatorium

ACUTE VIRUS PNEUMONITIS

Acute virus pneumonitis is a disease entity, known by such terms as acute pneumonitis, acute interstitial pneumonitis, or capillary pneumonia, which has recently assumed pandemic proportions in this country. It is characteristically a disease of the mucous membranes of the upper respiratory tract, involving the nose, pharynx or larynx, but may extend throughout the entire respiratory tract.

The etiological agent has been definitely determined as a type of virus which, after a failure with the usual laboratory animals, was successfully transmitted through the mongoose with negative laboratory controls. The virus fulfilled the general characteristics of a virus infection and the mongoose was able to develop neutralizing anti-bodies during the convalescent phase of the disease. All other attempts to establish an etiological agent were negative.

The clinical picture has many variations and is usually associated with upper respiratory symptoms, general malaise, slight temperature and cough. This may continue for three or four days and then subside. In the more severe cases the temperature ranges from 100° to 102°. Bronchitis may develop with a tightness in the chest and productive cough. At this time, the patient appears ill out of proportion to the physical findings which are present. These are usually only a few moist rales in the chest without signs of consolidation. There may be a mild leucocytosis with an increase in the polys. The disease terminates by lysis and there may be a rather extended convalescent period.

The x-ray findings are rather definite and in a series of eighty-six cases which were carefully studied, it was concluded (a) that x-ray evidence may not appear from thirty-six to forty-eight hours after the onset, (b) that the infection spreads from the hilum following the bronchial and vascular tree markings, (c) that the cases may be grouped according to the x-ray findings. At onset there is a shadow of increased density in the hilus region with a rather typical fan-shaped accentuation toward the periphery. Many of these plates strongly suggest the pictures seen in acute tuberculosis and great care must be made in this differentiation. However, these cases frequently clear in one to two weeks. In the second group the involvement is wide and more suggestive of broncho-pneumonia and the densities are not as fast in resolution. There may be contralateral involvement with markings strongly suggesting pulmonary edema. These cases are the most severe type and frequently take two to two and one-half months for complete resolution.

Fortunately severe complications in this disease are infrequent. However, pleurisy may be found and, in some cases, the convalescent period is rather long. A very persistent bronchitis with cough and sputum may hang on from several weeks to months.

The treatment is that of the usual upper respiratory infection, with bed rest during the stage of fever, with a bland diet and fluids. The sulfa drugs are of no value, although ammonium chloride and steam inhalations may prove useful.

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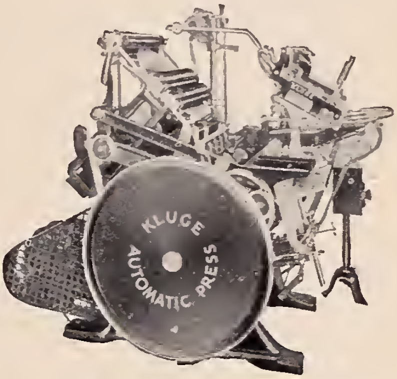
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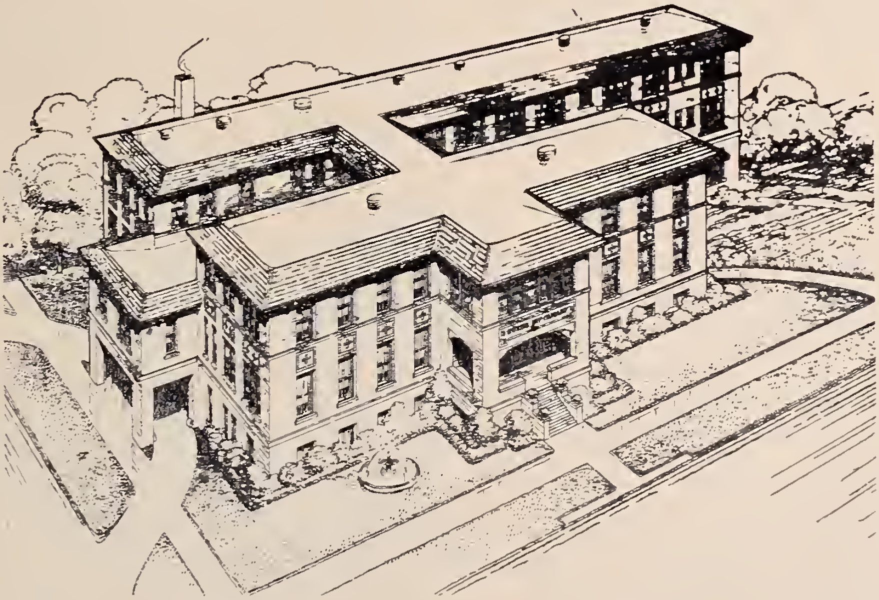

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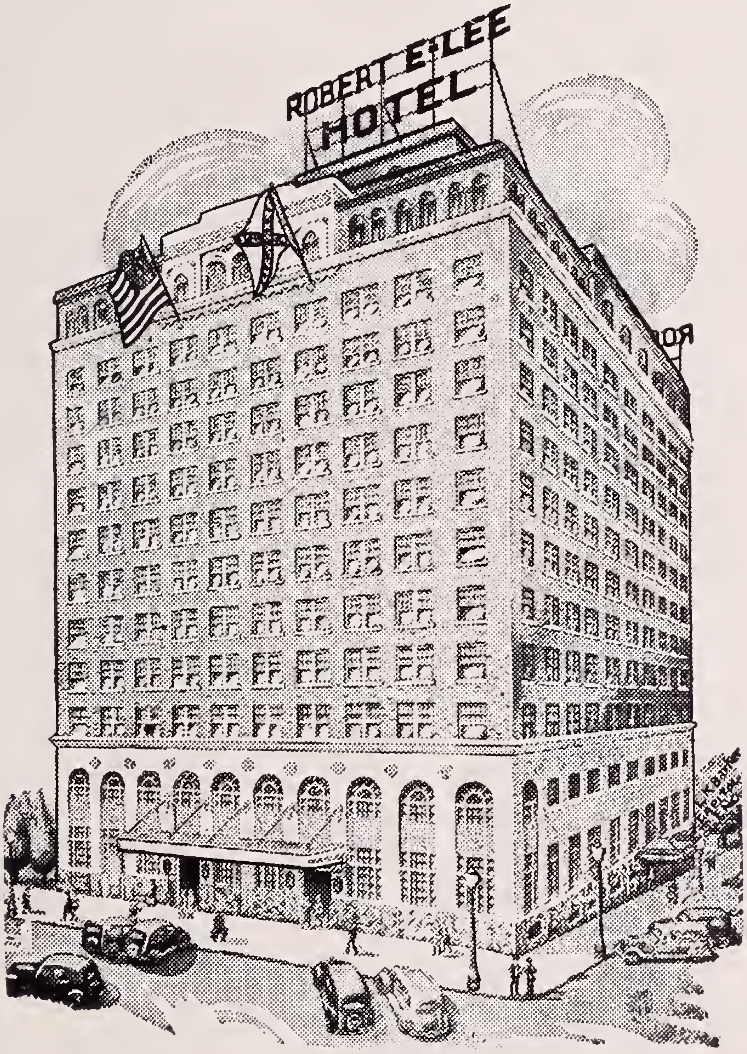

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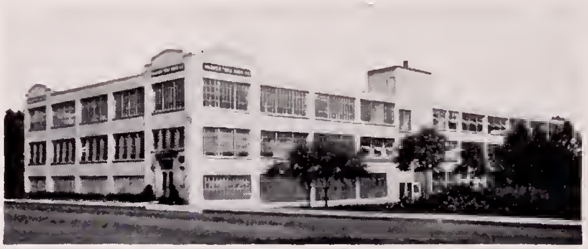

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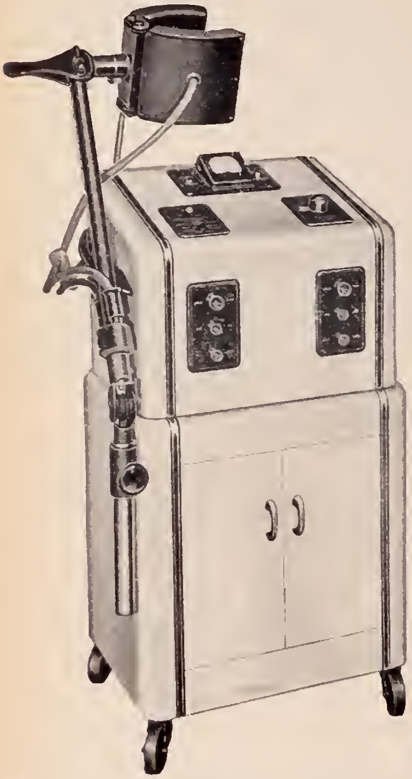

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1931 Tisdall, F. F.: Dietary factors and health, Soc. Tr., Am. J. Dis. Child. 42:1490, Dec. 1931.

1932 Summerfeldt, P.: The value of an increased supply of vitamin B_1 and iron in the diet of children, Am. J. Dis. Child. 43:284-290, Feb. 1932. Morse, J. L.: Fads and fancies in present day pediatrics, Pennsylvania M. J. 35:280-285, Feb. 1932. Henricke, S. G.: The vitamin B complex: Its role in infant feeding in the light of our present knowledge, Northwest Med. 31:165-169, April 1932. Langhorst, H. F.: Vitamins: Their role in the prevention and treatment of disease, M. J. & Rec. 135:326-329, April 6, 1932. Crimm, P. D.: Dietary of Childhood Tuberculosis: Cereal as a source of added mineral and vitamin elements; preliminary report, J. Indiana M. A. 25:205-206, May 1932. Troutt, L.: Quality studies of therapeutic diets: I. The ulcer diet; a committee report, J. Am. Dietet. A. 8:25-32, May 1932. Summerfeldt, P., Tisdall, F. F., and Brown, A.: The curative effects of cereals and biscuits on experimental anaemias, Canad. M.A.J. 26:666-669, June 1932. Sneed, W.: Ununited and delayed union of fractures, Kentucky M. J. 30:363-370, July 1932. Silverman, A. C.: Celiac disease, New York State J. Med. 32:1055-1061, Sept. 15, 1932. von Meysenbug, L.: Infant feeding with especial reference to some of its problems during the first year, Texas State J. Med. 28:543-547, Dec. 1932.

1933 Wampler, F. J., and Forbes, J. C.: Calcium and phosphorus metabolism in a case of celiac disease, South. M. J. 26:555-558, June 1933. Brown, A., and Tisdall, F. F.: The role of minerals and vitamins in growth and resistance to infection, Brit. M. J. 1:55-57, Jan. 14, 1933; Effect of vitamins and the inorganic elements on growth and resistance to disease in children, Ann. Int. Med. 7:342-352, Sept. 1933. Crimm, P. D., Raphael, I. J., and Schnute, L. F.: Diet of tuberculous and non-tuberculous children: Effect of increased supply of vitamin B concentrate and minerals, Am. J. Dis. Child. 46:751-756, Oct. 1933. Smith, A. D.: Consideration of various infants' foods, Pacific Coast J. Homeop. 44:463-465, Sept.-Dec. 1933.

1934 Somers, R., Rotton, G. C., and Rowntree, J. I.: Possibilities of improving dental structures, Soc. Tr., Bull. King Co. M. Soc. 13:6, Jan. 15, 1934. Blatt, M. L.: Development of infants on a diet of a special cereal mixture, Soc. Tr., Am. J. Dis. Child. 47:918, April 1934. Rice, C. V.: Anemia of infancy and early childhood, J. Oklahoma M. A. 27:125-129, April 1934. Hawk, W. A.: A few of the commoner feeding problems in infancy, Univ. Toronto M. J. 11:218-229, May 1934. Ross, J. R., and Burrill, L. M.: The effect of cooking on the digestibility of cereals, J. Pediat. 4:654-659, May 1934. Rice, C. V.: Sauerkraut juice for the acidification of evaporated milk in infant feeding, Arch. Pediat. 51:390-395, June 1934. Eder, H. L.: Iron therapy: A routine procedure during infancy, Arch. Pediat. 51:701-713, Nov. 1934. Lynch, H. D.: Fundamentals of infant feeding, J. Indiana M. A. 27:571-574, Dec. 1934. Chaney, M. S., and Ahlborn, M.: Nutrition, Houghton Mifflin Co., Boston, 1934, p. 323.

1935 Bailey, C. W.: Anemia in infants and young children, J. South Carolina M. A. 31:54-58, March 1935. Kugelmass, I. N.: The recent advances in treatment of nutritional disturbances in infancy and childhood, M. Comment 17:5-13, March 1, 1935. Ross, J. R., and Summerfeldt, P.: Value of increased supply of vitamin B_1 and iron in the diet of children: Paper II, Am. J. Dis. Child. 49:1185-1188, May 1935. von Meysenbug, L.: Breast feeding with especial reference to some of its problems, New Orleans M. & S. J. 87:738-743, May 1935. Tarr, E. M., and McNeile, O.: Relation of vitamin B deficiency to metabolic disturbances during pregnancy and lactation, Am. J. Obst. & Gynec. 29:811-818, June 1935. Blatt, M. L., and Schapiro, I. E.: Influence of a special cereal mixture on infant development, Am. J. Dis. Child. 50:324-336, Aug. 1935. Coward, N. B.: Infant feeding, Nova Scotia M. Bull. 14:525-532, Oct. 1935. Tisdall, F. F.: Inadequacy of present dietary standards, Tr. Sect. Pediat., A.M.A., 1935: Canad. M. A. J. 33:624-628, Dec. 1935. Marriott, W. McK.: Infant Nutrition, second edition, C. V. Mosby Co., St. Louis, 1935, p. 202. Summerfeldt, P.: Iron and its availability in foods, Tr. Sect. Pediat., A.M.A. 1935, pp. 214-220.

1936 Dafoe, A. R.: Further history of the care and feeding of the Dionne quintuplets, Canad. M. A. J. 34:26-32, Jan. 1936. Conn, L. C., Vant, J. R., and Malone, M. M.: Some aspects of maternal nutrition, Surg., Gynec. & Obst. 62:377-383, Feb. 15, 1936. Ross, J. R., and Summerfeldt, P.: Haemoglobin of normal children and certain factors influencing its formation, Canad. M. A. J. 34:155-158, Feb. 1936. Smyth, F. S.: Allergic diseases, J. Pediat. 8:500-515, April 1936. Lemmon, J. R.: Problems of the crying infant, Southwestern Med. 20:248-250, July 1936. Rice, C. V.: The success of treating celiac disease from a standpoint of vitamin deficiency, Arch. Pediat. 53:626-629, Sept. 1936. Smith, C. H.: Management of nutritional anemia in infancy, M. Clin. North America 20:933-950, Nov. 1936. Strong, R. A., editor: Nutritional anemia of infants, Orleans Parish M. Soc. Bull., pp. 6-9, Nov. 9, 1936. Jeans, P. C.: Specific factors in nutrition, Round Table discussion, J. Pediat. 9:693-698, Nov. 1936. Young, J. G.: Meeting the requirements for proper nutrition in infancy, Texas State J. Med. 32:531-533, Dec. 1936.

1937 Stearns, G., and Stinger, D.: Iron retention in infancy, J. Nutrition 13:127-141, Feb. 1937. Strong, R. A.: Nutritional anemia, Mississippi Doctor 15:13-16, Aug. 1937. Smith, C. H.: Prevention and treatment of nutritional anemia in infancy, Preventive Med. 7:115-124, Aug. 1937. Saxl, N. T.: Pediatrics, in Dietetics for the Clinician, edited by M. A. Bridges, third edition, Lea & Febiger, Philadelphia, 1937, pp. 637-639. Boyd, J. D.: Nutrition of the Infant and Child, National Medical Book Co., Inc., New York, 1937, p. 110. Brennemann, J.: Practice of Pediatrics, W. F. Prior Co., Inc., Hagerstown, Md., 1937, Vol. 1, Ch. 25, p. 19. Griffith, J. P. C., and Mitchell, A. G.: The Diseases of Infants and Children, second edition, W. B. Saunders Co., Philadelphia, 1937, pp. 106, 111. Saxl, N. T.: Pediatric Dietetics, Lea & Febiger, Philadelphia, 1937, pp. 131-133.

1938 Hoffman, S. J., Greenhill, J. P., and Lundeen, E. C.: A premature infant weighing 735 grams and surviving, J.A.M.A. 110:283-285, Jan. 22, 1938. Krasnow, F.: Nutritional influence on teeth, Am. J. Pub. Health 28:325-333, March 1938. Ratner, B.: Round Table discussion on asthma and hay fever in children, J. Pediat. 12:399-413, March 1938. Ratner, B.: Panel discussion on the role of allergy in pediatric practice, J. Pediat. 13:582-604, Oct. 1938. Snelling, C. E.: Nutritional anaemia, Bull. Acad. Med. Toronto 12:710, Oct. 1938. Dauphinee, J. A.: The iron requirement in normal nutrition, Canad. M.A.J. 39:483-486, Nov. 1938. Summerfeldt, P., and Ross, J. R.: Value of an increased supply of vitamin B_1 and iron in the diet of children, Paper III, Am. J. Dis. Child. 56:985-988, Nov. 1938. Tisdall, F. F., and Drake, T. G. H.: The utilization of calcium, J. Nutrition 16:613-620, Dec. 1938. Drake, T. G. H.: Introduction of solid foods into the diets of children, Canad. M. A. J. 39:578-580, Dec. 1938.

1939 Strong, R. A.: The most frequent causes of vomiting in infancy, Texas State J. Med. 34:665-676, Feb. 1939. Ratner, B., and Gruehl, H. L.: Anaphylactogenic properties of certain cereal foods and breadstuffs: Allergenic denaturation by heat, Am. J. Dis. Child. 57:739-758, April 1939. Monypenny, D.: Early introduction of solid foods in the infant diet, Soc. Tr., Am. J. Dis. Child. 58:1144-1145, Nov. 1939. Brown, A., and Tisdall, F. F.: Common Procedures in the Practice of Paediatrics, third edition, McClelland & Stewart, Ltd., Toronto, 1939, pp. 77-79.

1940 McDougal, L. L., Jr.: Feeding a normal infant, Mississippi Doctor 17:437-442, Jan. 1940. Monypenny, D.: The early introduction of solid foods in the infant diet, Canad. M. A. J. 42:137-140, Feb. 1940. Robinson, E. C.: A study of two hundred and forty breast-fed and artificially fed infants in the St. Louis area, Am. J. Dis. Child. 58:816-827, April 1940. Ratner, B.: Round Table discussion on food allergy, J. Pediat. 16.653-672, May 1940. Rosenbaum, I., Jr.: The management of the allergic child, Kentucky M. J. 38:199-203, May 1940. Barondes, R. de R.: Report of a case of pellagroid, M. Rec. 151:376-380, June 5, 1940. Brown, A.: The fourth Blackader lecture on a decade of paediatric progress, Canad. M. A. J. 43:305-313, Oct. 1940. Drueck, C. J., Vitamin therapy in colon and rectal disease, Illinois M. J. 78:337-341, Oct. 1940. Swift, F. L.: Infant feeding, Lackawanna Co. M. Soc. Reporter, 33:16-18, Nov. 1940. Bogert, L. J., and Porter, M. T.: Dietetics Simplified, ed. 2, Macmillan Co., New York, 1940, p. 181. Davison, W. C.: The Compleat Pediatrician, third edition, Duke University Press, Durham, N. C., 1940, No. 216. Hawley, E. E., and Maurer-Mast, E. E.: The Fundamentals of Nutrition, C. C. Thomas, Springfield, Ill., 1940, pp. 296, 456. Kugelmass, I. N.: The Newer Nutrition in Pediatric Practice, J. B. Lippincott Co., Philadelphia, 1940, p. 372. Leaman, W. G., Jr.: Management of the Cardiac Patient, J. B. Lippincott Co., Phila., 1940, p. 549. Paterson, D., in Index of Treatment, edited by R. Hutchison, ed. 12, revised, Williams & Wilkins Co., Baltimore, 1940, p. 491. Thomas, G. I.: Dietary of Health and Disease, ed. 3, revised, Lea & Febiger, Phila., 1940, pp. 171, 177, 178.

1941 Gipson, A. C.: The role of allergy in pediatric practice, J. M. A. Alabama 10:272-274, Feb. 1941. Ross, J. R., Monypenny, D., and Jackson, S. H.: II. The effect of cooking on the digestibility of cereals, J. Pediat. 18:395-398, March 1941. Kennedy, A. S., Snider, O., Hazen, J. S., and McLean, C.: The dietary management of intestinal tuberculosis, Canad. M. A. J. 44:380-385, April 1941. McAlpine, K. L.: Management of the nutritional anaemia of infancy, Canad. M. A. J. 44:386-390, April 1941. Patek, A. J., Jr., and Post, J.: Treatment of cirrhosis of the liver by a nutritious diet and supplements rich in vitamin B complex, J. Clin. Investigation 20:481-505, Sept. 1941. Bercovitz, Z., and Johnson, H. J.: Ulcerative Colitis, in Dietetics for the Clinician, by M. A. Bridges, fourth edition, revised, Lea & Febiger, Phila., 1941, p. 295. Bridges, M. A.: Dietetics for the Clinician, fourth edition, revised, Lea & Febiger, Phila., 1941, pp. 727, 751, 809. Griffith, J. P. C., and Mitchell, A. G.: Textbook of Pediatrics, ed. 3, revised, W. B. Saunders Co., Phila., 1941, pp. 87, 91. Rowe, A. H.: Elimination Diets and the Patient's Allergies, Lea & Febiger, Phila., 1941, p. 230. Twiss, J. R.: Gall-bladder Disease, in Dietetics for the Clinician, by M. A. Bridges, fourth edition, revised, Lea & Febiger, Phila., 1941, p. 401.

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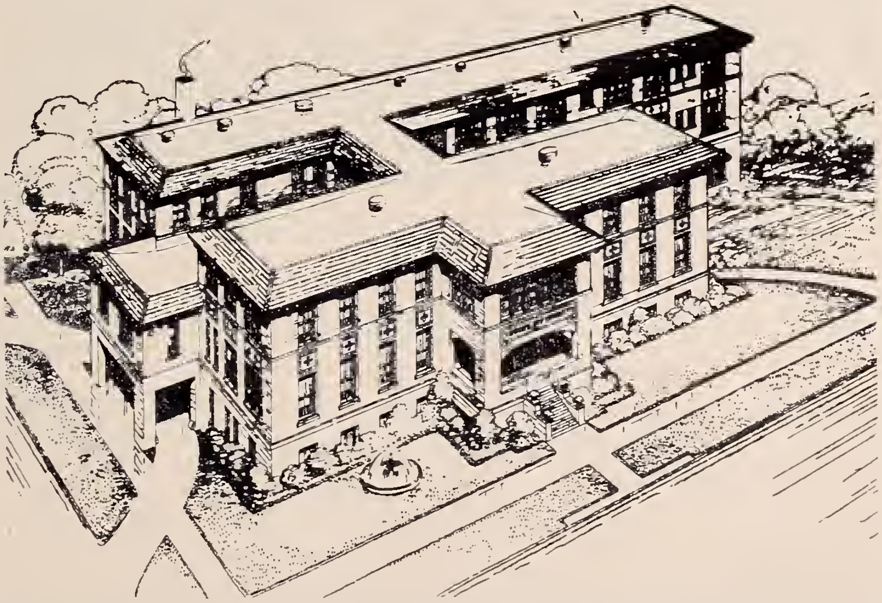

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The Diagnosis of Neuro-Psychiatric Disorders*

DAVID C. WILSON, M.D.
CHARLOTTESVILLE, VA.

THE LOCALIZATION of a neurological lesion can be the most exact procedure in medical diagnosis, while the classification of psychiatric disorders is always subject to change and seems to vary with the attitude of the diagnosing physician. Therefore, it is difficult to consider neurology and psychiatry under one heading, since the methodology of the approach in the one science differs so much from that in the other. Nevertheless, when considered from a practical standpoint a knowledge of the nervous system is essential to psychiatry while an understanding of personality reactions is more valuable in neurological diagnosis than in any other form of medicine.

The psychiatric disorders of man are now recognized as personality reactions, results of disease in the internal or external environment which so to speak surrounds that integrated unit of both psyche and soma. To understand the interrelation of these reactions of the individual as a whole to the nervous system it is necessary to review the development of both, thus making obvious the dependence of personality on nervous structure by demonstrating the parallelism of their development as well as the parrallelism of their behavior.

The individual, that is, the you, the "I," the living human that inhabits this world, modifies its behavior in response to many factors; a stomachache for example, or a loss of fortune. The heart, the lungs, or the genitourinary tract may be the upsetting cause but the telephone system, that is the nervous system, has most to do with the type of behavior a stimulus within or without the body will produce. The behavior forthcoming will vary with stumulus and with the part stimulated within certain limits, but the development of the nervous system with the concomitant development of the personality has fixed certain stages where the behavior follows a definite pattern so that regardless of stimulus or parts stimulated, if this level of integration is involved, a certain fixed type of reaction will follow. It is possible then to speak of certain levels of human behavior as characteristic of levels of the nervous organization.

The most primitive form of nervous structure is the simple reflex arc. In some organisms this form of nervous system is ample to take care of the total behavior. At one stage in the development of man a simple reflex arc is sufficient and the human being is a reflex animal. As the egg develops on into the adult this type of nervous system is not destroyed but is simply added onto so that in the adult we have many forms of reflex activity which use only the simple sensory-motor arc. There is therefore in the fully developed man a level of human behavior which can be designated as "reflex." This behavior is far from the consciousness and takes place frequently without the understanding of the individual. Some reflex behavior seems to be handed down through the race, as the fear of falling in a baby. Other reflex activities can be learned or developed and very frequently are condition reflexes such as described by Pavlov and used now so extensively in the treatment of alcoholics.

As man developed through the ages a higher organization was necessary so the upper portions of the spinal cord and the portion of the central nervous system known as the brain-stem developed. The brain-stem is composed of the medulla, the pons, the midbrain and that portion of the cerebrum known as the diencephalon, or what is probably better known as the hypothalamic region and the region of the basal ganglia. This portion of the central nervous system is organized into sensory and motor structures which have to do with many higher functions which cannot be handled by the simple reflex arc. Such functions are coördination, balance, the work of handling the blood supply to different parts, and even more complex functions, as the regulation of the hormonal secretion from the different glands of the body. Sensations are recognized here. There is interpretation of many of the cruder forms. All of these activities are done without consciousness so that this type of behavior can be distinguished from reflex behavior by calling it the "instinctive" or that part which is born within the human being.

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*Read before the fifty-seventh annual session of the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., February 10-13, 1942.

The brain-stem carries practically all the older parts of the nervous system, some of them vestiges of centers much more highly developed in the lower animals. It is most natural therefore that this part of the nervous system should carry that type of behavior which is highly developed in the lower animals; the primitive emotions, the fears and the rages which are uncontrollable, are found accompanying lesions in this area. When we think therefore of all that mass of material which makes up the instinctive drives in man, it is well to think of the instinctive part of the central nervous system; namely, the brain-stem.

The next level to be added in the integration of the human individual was the cerebrum with its many convolutions permitting a wide spread of function through numerous nerve cells. This spreading out of function permits a cleverer handling of details and also a finer coördination of movements, and so we may speak of the cerebral cortex as the level of "intelligence." Those skills which are measured by intelligence tests, the ability to handle situations quickly and to carry on learned acts, indeed all those things which take part in the usual activities of the normal man, are functions of the cortex. As the ability to control this cortical functioning, it marks the degree of intelligence. However, the cortex of the cerebrum differs in many parts. In certain parts there are association areas which make still higher functioning possible, making another level of integration which might be called the "ethical," the level of judgments, reasoning and conclusions. This last function is supposed to be especially characteristic of the frontal lobe, although there must be other association areas which take part in this higher criticism. Thus we have evidence of the parallelism between the development of different structural levels in the central nervous system and the different levels of human behavior. Therefore it is well when studying either disorders of the human behavior or diseases of the central nervous system to be able to localize the lesion or the dysfunction among the different levels of integration.

When this fundamental relationship is clear then, for the practical consideration of neuropsychiatric diagnosis let us take up a study of neurological localization as it can be approached from this point of view. Next let us return to consider the personality disorders similarly, so that in the end there will be a clearer view of each when considered from this approach.

First take the central nervous system and consider it somewhat in reverse to its method of integration. Starting in the top or in the cortex, we find nerve cells located there whose fibers pass down through the brain-stem and down through the spinal cord to reach the level of the anterior horn cell or the posterior root ganglion, thus entering into the fundamental reflex arc. These long fibers which traverse the different levels of integration from the intellectual to the primitive are made up of two types: the sensory fibers, which transmit the affective stimuli to the cells of the cortex, and the motor fibers, which transmit the impulse from the cortex to the motor cells of the reflex arc, from where they go to stimulate the muscle. Thus we have two long fiber pathways extending from one end to the other of the central nervous system. If, therefore, we have a lesion of the central nervous system. it is first necessary to decide whether it is in the sensory pathways going in or the motor pathways coming out, then next, to decide at which level these long pathways are disturbed. In other words, first there is the long section view and then to localize definitely the lesion it is necessary to get the cross-section. Think, therefore, of the central nervous system as a long tube extending from the cortex down into the anterior horn cell in the cord, up and down which run two long bands of fiber, one afferent and one efferent, one motor and one sensory. Then next cross this tube by sections localized by the symptoms characterized by disturbances at these levels.

The first cross-section would be the level of the cortex. The frontal cortex or the ethical portion perhaps should not be considered in the cylinder, as most lesions there do not affect the long fiber pathways. They do affect the ethical process, causing a dilapidation of human personality especially marked by the loss of moral sense. Changes here are found in the aged and in patients afflicted with paresis. Their frontal lobes atrophy and their ethical sense disappears. The top of the column that we are considering, therefore, probably would be best located further back in the region of the Rolando fissure, taking in the large motor areas in front and widespread sensory areas behind. If this is done, diseases of the cortex have quite definite symptoms. There is first the involvement of a whole part such as a hand or perhaps an arm in a lesion here. Also it is quite easy for the motor portion to be involved without the sensory. Then there are the aphasias; that is, the loss of the knowledge of speech without an inability to talk. There also is astereognosis, or loss of the ability to recognize things by their shape. Finally, there is a tendency for convulsions. A lesion in the cortical level is more likely to produce a convulsion than one anywhere else. This does not mean, however, that convulsions cannot be produced by disorders in other parts of the central nervous system.

The second level of transsection of this cylinder is at the internal capsule. Here the long fibers are grouped together. They come close to the centers of feeling and emotion as well as near the visual pathways. An injury at this level is more likely to give a complete involvement of one side, such as a hemiplegia involving both the arm and leg. A loss of both sensory and motor power at the same time is quite frequent. Emotional disturbances, especially those that cannot be controlled and are out of proportion to the stimulus, are to be expected. From lesions here will result loss of half-vision, the hemianopsias resulting from the destruction of the visual pathway on one side. This is the area so frequently involved in cerebral hemorrhage and cerebral thrombosis so it is quite important to know how to make this localization. It is quite easy when it is remembered that in no other place do the long fibers up and down the central nervous system come so close to the horizontal fibers that pass from the retinae back to the posterior tips of the brain in the visual pathways. Therefore, if there is a motor or sensory loss in the legs and also a defect in the visual fields, one can be sure that something is wrong in the internal capsule or its neighborhood.

The next level takes in the portion of the brain-stem known as the midbrain and is especially concerned with the nerves to the eye muscles. Disturbances in this portion produce changes in the pupillary reflexes and cause the different squints as well as double vision. These changes are often seen for instance in encephalitis and in some vitamin deficiencies. Paralysis of upward gaze is thought to be especially characteristic of this area. Cross paralyses are found following disorders here; that is, involvement of the eyes or face on one side and the extremities on the other. The long fibers often escape at this level because the most frequent involvement is in the roof of the midbrain where the motor nuclei are located, but this fact brings on another characteristic of this level: namely, the early increase in intercranial pressure, due to the fact that the aqueduct of Sylvius, a small canal which connects the third with the fourth ventricle, is easily occluded, and when it is, pressure immediately rises within the cranial vault. Therefore, in cases of encephalitis whether due to virus or for other reasons, when the optic disc is blurred and when there are abnormalities in the behavior of the eye muscles, we can be sure that the midbrain is involved.

The fourth level to be considered is that of the pons. It is here that the fibers of the cerebrum cross the brain-stem increasing its scope, but the most characteristic symptoms are found in the face because in the pons arise the facial nerves supplying the muscles of expression and the great trigeminal nerve which takes care of the sensations arising from the face. Therefore lesions here cause loss of sensation and loss of muscular movement. Indeed this segment might be called the segment of facial expression because the face so dominates our lives and is so important in normal functioning. Yet in the same segment two other functions are represented which are quite important, for it is here that we find the vestibular nerve with the cerebellum attached, which is just an outgrowth of this nerve and, like it, has to do with balance and coördination. When we have disturbances then of this function, we most frequently have disturbances also in the face or in that other portion of the eighth nerve which arises from this same section; that is, the auditory nerve or nerve of hearing. In tumors of this region all these nerves are involved, thus making their localization fairly easy. Accoustic neuromas usually start with pain in the face. Then there is deafness and then tinnitus and loss of balance. Such symptoms definitely give one the cross-section of the pontine level.

The final level of the brain-stem is that of the medulla, a structure that looks very much like a jonquil bulb and for that reason is called the "bulb," and the nuclei which are found there are spoken of as the "bulbar" nuclei. This portion has to do with speech and with swallowing as it controls the tongue, the muscles of the throat, and the palate. Disturbances here therefore are represented by difficulties of speech, such as slurring or monotonous speech and by asymmetries of the palate as well as deviations of the tongue. Bulbar paralyses are the terminal states of many diseases and also are seen in the very serious acute infections of the central nervous system, and denote always a grave danger. In practically any disorders, as long as the bulb remains active, there is hope, but when paralysis occurs here there is nothing that can be done, even with a respirator.

Below the brain-stem in the spinal cord the changes in level of function are not so abrupt. The cervical cord functions practically the same from the foramen magnum until we reach the cervical enlargement and then again, the thoracic cord is very much the same in function until the lumbar cord is reached. The same is true for the lumbar cord until we reach the conus medullaris at the tip. Finally the cauda equina, which is really not a part of the spinal cord, acts in an entirely separate manner. Lesions of the cord in general, if they are posterior, are more likely to cause sensory disturbances; if they are anterior, they cause more motor signs; if in the center of the cord, there is a dissociation of sensation. There may be loss of sphincter control and trophic changes. Practically any expanding lesion of the cord causes blocking in the subarachnoid space which can be recognized by properly conducted examination of the spinal fluid.

The characteristics of the cervical level are mainly due to the fact that it supplies the arm and hand and that sympathetic fibers destined for the cervico-sympathetic pass down through this section and are often injured, thus producing what is known as Horner's syndrome. The cervical cord in cross-section is quite wide and therefore the blood supply at the center is liable to be deficient, producing degenerations in this area with subsequent characteristic findings below. Lesions of the cervical cord are quite serious and are approached surgically with a great deal of risk. The thoracic cord has a blood supply that is not too adequate so that lesions here produce more marked changes in the long fiber pathways and also cause disturbances of the sympathetic, which is especially represented in this area. In this region the spastic paralysis or the loss of deep sensation, which are results of long fiber involvement, have their beginnings in such diseases as pellagra and pernicious anemia.

In the lumbar cord there is involvement of the legs and especially of the sphincters, while in the conus medullaris the special characteristic is the "saddle" anesthesia, the symmetry of the lesion, and the early involvement of the sphincter control. When the lesion is in the cauda equina there is usually loss of sensation as well as pain, and the findings are similar to those found in disturbances of the peripheral nerves.

The peripheral nerves could also be considered as a level of the central nervous system, as they themselves have definite characteristics. 1) Disturbances of the nerve start at the periphery and work centralward, usually with numbness and tingling. 2) There is actual loss of sensation as well as motion. 3) Usually tenderness along the nerve exists and when more than one nerve is involved the resulting disturbance is liable to be symmetrical. 4) Finally, in the autonomic nervous system those unconscious nerves which control the viscera of the body can be considered as another level of neurological characteristics. Here we have widespread effects with no definite focalizing. Pains are vague and continuous, are annoying and have frequently emotional content. Vascular disturbances and disturbances of sweating, as well as disturbances of the gastro-intestinal tract, frequently accompany lesions of this level.

Thus there is a method of localizing any lesion of the nervous system. If the long motor pathways are involved, there will be more or less paralysis, reflex change, change in muscle tone and often defense reactions such as the signs of Babinski. If the long sensory fibers are involved, there will be change in sensation. The involvement of the motor means that the lesion is more anterior in the cord or brain-stem, while the sensory involvement suggests a posterior lesion. The analysis by cross-section enables one to decide whether the lesion is in the cortex, internal capsule, midbrain, pons, medulla, the cervical, thoracic, or lumbar cord. These few findings characteristic of the cross-section can be extended so that the lesion can be more closely localized but for all practical purposes such a study should enable one to tell where the lesion is as well as what to do about it.

The reactions of the personality as a whole do not lend themselves to such exact localization but they can be divided roughly by that coördinated portion of the nervous system which is most likely to be employed. It is not meant by this that the personality is a function of the nervous system, as indeed it is well known that practically the whole of the nervous system below the neck may be completely non-functioning without affecting any gross change in the total personality. But it is emphasized that certain portions of the nervous system have coördinating duties which are confined mainly to certain portions of the total reaction, so it is therefore possible to consider behavior from the nervous system point of view. At all times there is reflex activity which is handled through the sensory-motor arc involving the two roots and the cells of the spinal cord. There is instinctive behavior which in the main is correlated by those parts of the brain stem below the internal capsule, around the base of the brain, in the midbrain, pons, and medulla. These learned reflexes and drives which have been handed down through the ages, and which are added onto by the experiences of each life, are constantly influencing the more controlled behavior which institutes the workings of the cortex and the frontal lobe. Mental diseases result from the conflict engendered by these subconscious forces in conflict with each other or with the more conscious portions of the personality on the one hand, or from the conflicts between the more conscious and the enviroment at large. When difficulties occur, the personality attempts to defend itself, first, by more or less intelligent methods such as are used by everyone who gets into difficulty. Next, more primitive means are used, means that are characteristic to all animals and probably handed down through the race. Finally then, reactions of defense become more and more primitive until gradually there is a change back to reflex behavior, when there is nothing really but automatic reaction. With this disintegration from the intelligent to the reflex frequently goes a change in personality. from the adult to the infantile and from the civilized man to the savage. Thus mental disease can be estimated as to its severity by the method of defense offered and by the stage of this backward movement from the cortex to the brain-stem to the spinal cord, and from the adult civilized individual to the subcultural infant or uncivilized man. There are therefore two characteristic types of reaction of the personality as a whole to conflict: first, those methods of defense called mental mechanisms which it uses to prevent disintegration; and second, the disintegration process itself which may be a retreat of the intact personality toward a more infantile level or may be a breaking up of the integration with the appearing of many forms of disintegrated behavior.

For the early diagnosis of mental diseases, therefore, we have to realize that, besides the integration paralleling development of the nervous system, we also have a growth of the personality from childhood to adulthood. So, when there is retreat there will be a return through the ages of life as well as the levels of the central nervous system, and the defense mechanisms used by the personality in an effort to keep intact will correspond to the age as well as the stage of integration. If this is understood, one is able to recognize abnormal changes in the behavior of individuals in their beginnings and to estimate their severity. This is done, first, by considering the mental mechanism that the person is using to protect his personality, and second, the extent of regression or return toward the reflex level that characterizes the behavior.

Therefore, now it is necessary to consider the types of reaction that the personality uses when in difficulty. These are the ones that anybody uses when up against some trying circumstances. In mental disease there is only a difference in degree or a difference caused by the fact that these defense reactions have become habitual and cannot be checked. For instance, one of the most common methods of escaping a difficulty is to run away. This is known as a flight reaction, used as a method of defense by many animals. In man this method is not used by actual flight, but, for example, he may try to work so hard that he cannot remember his difficulties or have time to think of them. Constant talk keeps other people from bringing up embarrassing questions. This is a very normal procedure, used by all of us many times, but this may go on to be habitual and beyond control. When this happens, we have the behavior of the manic, who attempts to fly into reality to escape. Another type of reaction is that supposed to be used by the ostrich when he hides his head in the sand, thinking that things that he can't see can't hurt him. This method of solving difficulty is used by large masses of people in meeting things that are unpleasant. For many years the existence of venereal disease was so handled. People at large refused to admit that syphilis and gonorrhea existed. There was and still is the same attitude toward prostitution. This type of reaction when it becomes pathological produces the hysteric, a person who seems to feel that what he does not admit can't hurt him. He therefore puts down into his unconscious all conflicts, and goes blithely on his way saying nothing is the matter with him. His attitude is one of indifference to striking physical monstrosities. However, there is soon an explosion and the submerged difficulties come out as a paralysis, a headache, a blindness, or some other such more socially accepted symptom, but one still that the hysteric refuses to recognize as related to his underlying conflicts. Indeed it is characteristic of the whole group known as psychoneurotics that they show great concern over inconsequential somatic disturbances to keep out of consciousness major personality conflicts which lie buried below.

Another reaction is the one used by the opossum when he plays dead. This reaction is seen in some severe depressions, when to escape difficulty these people wish for death and occasionally pass into stupor. This method of lying dormant does not bring them security or peace but confines their anxieties and fears within them, causing great agony and suffering. The catatonic reaction so frequently seen in dementia praecox is something of the same nature, although the constant vigilance also suggests the superstition that "if you look the bear in the eye it can't hurt you," for these people so concentrate themselves on their subconscious difficulty that in their concentration they are like a person reading a novel or a man watching a boxing match. Perhaps the "absent-minded professor" would be a good name for this type of reaction.

The most common type of personality response is the so-called alibi reaction, an ego-protecting mechanism that the human race could not get along without. We must have something on which to blame our shortcomings, some explanation of the harshness of reality which will soften its impact on our self-esteem. This is done by blaming the other fellow, putting out into the outside world failures and faults that we have within, a process that is known as projection. This becomes habitual. As it becomes more habitual and fixed the person using it escapes further and further from the truths of life and finally develops an organized delusion which protects his ego better than anything that he can find in the real world, so that it is practically impossible to persuade him to give it up. Thus we have that most widespread form of mental disease known as paranoia or paranoid condition or paranoid form of dementia praecox.

The most satisfactory reaction to difficulty is that of the straight-forward attack which faces squarely and solves, thus releasing the personality from the uncomfortable tension of unsolved conflict. This method is not accompanied with any danger of mental disease but unfortunately is not used in the majority of instances by the human personality. Many of the reactions such as I have described may solve difficulties, so reducing tension, but in most cases they are inadequate, thus leaving tension states which produce anxieties as well as other somatic complaints. So even when they become habitual, they still do not solve, thus producing a constant state of agitation and producing more and more need for flights into dreams or the organization of further delusions. Reactions such as sublimation, where higher things are substituted for baser desires, allay the tension states successfully. The "sour grapes" reaction, where we say those things that we cannot reach are not worth the struggle, is frequently quite successful. But many of these mechanisms do not reduce the tension sufficiently and finally lead to disease states which gradually develop into fairly definite patterns varying with the individual but yet so characteristic that they can be recognized as definite mental diseases. Thus the putting of a tremendous lot of energy into the accomplishment of an unessential suggests the beginning of a manic reaction, while the pretending to be helpless and hopeless in the face of many complaints suggests the depressive. These people complain of being misunderstood and of the fact that no one can help them. Third, the great concern over minor physical complaints, as it has been stated, suggests the psychoneurotic, while the use of infantile and childish methods of defense suggests the schizophrenic. And finally, the great alibi reaction may occur alone or color all the others. Accompanying these reactions, there is usually found some evidence of the retreat from adult integration. When a person gets into difficulty there is a tendency to use reactions that have been successful in childhood, such as crying or peevishness. Regression, however, can go far beyond the usual. An individual who is mentally sick frequently returns to a sucking infant without culture and without any evidence of habit formation. At times even regression seems to go back through the race to archaic language and cannibalistic behavior. This reaction can usually be followed from the ethical to the intellectual, to the instinctive and to the reflex, but there is also evidence of descent through different cultures of man as he has grown up from savagery.

Therefore, the paretic frequently shows rapid regression as described. In the early stages when his cortex is irritated, he is quite intellectual, sometimes putting over large schemes that are successful. His ethical sense begins to deteriorate, he becomes more hard-boiled, more selfish, domineering, lacking consideration of others, but still brilliant, capable of great organization and of tremendous activity. Al Capone is a case in point. Following this his intelligence disappears. He passes from the cortex to brain-stem behavior, and from there to reflex, as he goes back down towards subcultural man.

Therefore, one of the earlier signs of mental disease is evidence of retreat from the self-controlled pattern of adult behavior. For the early diagnosis of mental diseases it is necessary to know the extent to which the individual is integrated; namely, his usual pattern of behavior. The first indicator is the change in this pattern, any change which will follow one of two paths; that is, the path of abnormal protective mechanisms or the path of regression toward childhood. These two processes may go on simultaneously but regression is more likely to follow when the mechanisms fail. It should be the privilege then of the general practitioner to recognize mental disease before anyone else, because living with his patient as he does, meeting him in the ordinary walks of life, he should be able to pick up the first deviation from the normal. When people begin to do unusual and strange things. it should put the doctor on the alert, especially if this unusual behavior follows some well-known defense mechanism, or shows signs of regression.

In conclusion, it is well to know the parallelism between the levels of construction of the central nervous system and the integration of the personality, so the diseases of each can be understood and their relationship one with another.

Acrodynia

REPORT OF FOUR CASES FROM MISSISSIPPI

C. E. WARD, M.D.
JACKSON, MISS.

THE TERM acrodynia literally means "painful extremities." It was first used about 1827, in France, to describe an epidemic disease (apparently arsenic poisoning) among adults.

At the present time, the term is used in the United States to describe an entirely separate condition of unknown etiology which is seen only in young children. This disease has been recognized in the United States as a clinical entity only during the past thirty years.

Swift[1] in Australia, in 1914, reported cases of the disease which he called erythedema because of the redness and swelling of the extremities. These cases have been known as "Swift's Disease" in Australia.

Bilderback[1] of Oregon reported, in 1920, the first cases described in this country. He noted a similarity to pellagra, but gave no definite name to the disease which he described. For a time, this condition in the United States was confused with the century old cases of arsenic poisoning in France, and the term "acrodynia" was adopted and has prevailed to the present time.

In spite of many suggested causes such as arsenic poisoning, infection, and vitamin deficiencies, the etiology of acrodynia is absolutely unknown[2]. Most patients are children from six months to three years of age. Most of them live in the country or in small towns.

The laboratory findings are uniformly negative.

The pathologic findings have been varied and inconsistent. Death usually occurs from starvation, vitamin deficiency, exhaustion, and secondary infection. These terminal states may cause the described degenerative changes in the central nervous system, the peripheral nerves, and the sympathetic system If recovery occurs, it is complete and without any residuals.

A well developed case of acrodynia is as characteristic and as easily recognized as any known disease. No disease makes such an impression on me. I marvel at the profound symptoms and speculate about the etiology, pathology, and altered physiology.

The symptoms of acrodynia develop slowly and progressively. The infant changes his normal behavior. He becomes unhappy, fretful, and irritable. He sleeps poorly. The appetite steadily diminishes. He drinks much water because of profound sweating. No disease in children causes such sweating. The skin is usually cold and clammy. Various types of generalized rashes appear. The rash may persist or recur irregularly for weeks.

After several weeks, the hands and feet become pink. This has led to the name "Pink Disease." These extremities itch and burn, causing the child to gnaw the hands and to rub the feet on the bed clothes. The redness is more marked at the ends of the fingers and toes. Desquamation occurs. In some cases the cheeks and the tip of the nose are red. The hair may fall out or be pulled out. The erupted teeth may fall out, and the mouth may be sore. There is often photophobia.

The child shows great general weakness and hypotonicity of musculature. Late in the disease, the deep reflexes may be lost. The photophobia and muscular weakness often cause the child to assume peculiar positions such as the knee-chest position with the face buried in the pillow, or he may bend over from the sitting position until the face is between the legs. Secondary infections in the respiratory tract and the skin are common. The pulse is fast and the blood pressure elevated.

The nervous and mental reactions are completely altered, and the child shows a picture of complete misery. Slight signs of meningeal irritations may occur.

The treatment is supportive and symptomatic. Feeding is most important. Infections should be treated vigorously. Recovery usually occurs spontaneously, after six or eight months, if the child's nutrition can be maintained and complications do not develop. Sedatives are usually necessary for adequate rest.

All of the common vitamins have been tried in treatment. None is apparently specific. Some workers have claimed rapid improvement from intramuscular administration of Vitamin B_1, 2000 units daily[3], and of the Vitamin B-Complex. Others have obtained no apparent benefit from these preparations. The Vitamin B-Complex may be the preparation of choice, but since deficiencies are usually multiple, it is best to give all of the common vitamins.

Acrodynia is not extremely rare. At least a thousand cases have been reported. More cases have been reported from Australia than from any other country. I thought it would be of interest to report four cases seen in private practice in Mississippi from April 22, 1940, to January 4, 1942. To my knowledge, no other cases have been reported from Mississippi.

All four children were white males. Their ages varied from seven to sixteen months. The feeding history in all cases showed an inadequate intake of important foods and vitamins. One child (Case 1) developed symptoms while living in Yazoo City, Mississippi. His father was an oil driller. It is interesting to note that the other three children lived on farms near Brookhaven, Mississippi. As all of the children developed most of the characteristic symptoms already described, I shall not review their individual histories in detail. All showed loss of appetite, weight, and strength. Their muscles were flabby and hypotonic. They were restless, fretful, and irritable and did not sleep well. They showed profuse sweating and maceration of the skin and a macular rash. All showed photophobia. One did not develop redness of the hands and feet. None lost his hair and teeth. All laboratory tests, including the serologic tests for syphilis, were negative.

Symptoms were present from two weeks to five months before admission. Case One showed a severe impetiginous infection superimposed upon the characteristic rash.

Case Two had developed symptoms only two weeks before admission. When first seen the child showed marked nervous symptoms and opisthotonus. His neck was stiff, and he screamed with pain on flexion of the spine, hips, or legs. He showed a macular rash, coldness of the skin and sweating. Complete laboratory studies, including examination of the cerebro-spinal fluid, showed no abnormalities. In addition to acrodynia, this child probably had scurvy. Under treatment he improved rapidly, and the hands and feet never became red. He was completely well in a few weeks.

All of the children were followed closely, and all of them improved under treatment. Case Two was seen early and responded more rapidly to treatment. The first three cases recovered completely after three or four months of treatment. Case Four was first seen January 4, 1942. When last heard from, on February 4, 1942, he was almost well. His family physician is carrying out his treatment at the present time.

Treatment consists of general management and administration of vitamins and liver extract. The diet was corrected and feedings were forced. Sedatives were used when necessary for rest.

All of the common vitamins were given by mouth in the form of Vipenta (Roche), 25 drops a day and Vitamin B-Complex (White's), 25 drops a day. These preparations furnished about 2500 units of vitamin B_1 daily and fair amounts of the Vitamin B-Complex.

One cubic centimeter of Reticulogen (Lilly) was given twice a week by the family physician. This preparation contains 1000 units of vitamin B_1 per cubic centimeter in addition to liver extract.

Acrodynia is the most interesting disease that I have ever studied. It is hoped that the near future will give us the key to its obscure etiology and pathology, and that it will give us a specific treatment for this disease.

1. Bilderback, J. B.: Acrodynia. In: Brenneman, J: Practice of Pediatrics, Hagerstown, Maryland, W. F. Prior Company, Inc. 1936. IV. Chapter 20.
2. Calvin, C. Virgil and Taylor, Clifton C: Acrodynia: Its Possible Cause. The Journal of Pediatrics, 6: 385 (March) 1935.
3. Forsyth, G.: Pink Disease Treated by Vitamin B_1. Medical Journal of Australia, 2:751 (November 18) 1939.

Use of Lime Water in Reducing Nitritoid Vascular Reactions in a Public Health Unit*

A. L. ADAMS, M.D., Director
Adams County Health Department

IN THE CONDUCT of a public clinic for syphilis control, certain self-evident facts are constantly to be kept in mind. The clinic is a public agency, subject to closer scrutiny by the public, with resulting criticism—favorable or unfavorable—than other organized clinics, private or hospital-controlled. It is maintained by publicly contributed funds for the greater part, and administered in the majority of cases by the public health officer, who has many other highly essential public health activities which may suffer in part through treatment reactions, preventable or otherwise. These reactions should be reduced to a minimum if possible while gaining necessary objectives, and reactions obtained should be explainable in the light of recent knowledge and practices used in leading clinics. All precautions should have been taken to minimize them and reduce their incidence. With just an occasional reaction and solicitous interest on the part of the health officer in the few that do occur a maximum attendance may be expected, modified somewhat by lack of travel facilities, ignorance, indifference, inability to leave home or occupation because of deaths, etc. All these latter conditions can be improved in time, but an occasional death, or even severe nitritoid reaction, may defeat the main function of the clinic—that of finding syphilis patients, treating them and their contacts to non-infectiousness, and satisfactorily educating the population in the area to insure a permanent reduction in the amount of syphilis. It is assumed too often that public health clinics are established primarily to treat syphilis only, while the main purpose of reducing syphilis and keeping it reduced is lost sight of. Epidemiology is best practiced in a well-regulated syphilis clinic, and a syphilis clinic without epidemiological work cannot show its best results. In fact, the presence of a syphilis clinic in a community may well release the normal inhibitions of fear of the disease. With these main purposes in mind, one can confidently expect benefits which more than overbalance the effort expended and money spent in combating the disease. "Nitritoid reaction" is used in a broad sense to include the immediate nitritoid vascular crises and the reactions occurring a few hours to a few days later, such as gastro-intestinal, pruritic, asthmatic and urticarial reaction. Stokes, page 476, figure 255—1934 of *Modern Clinical Syphilology*, considers all the above reactions under the broad heading: "Warning, Prevention and Treatment of the Nitritoid Vascular Reactions." In small print he adds, "And its correlated gastro-intestinal, pruritic, asthmatic and urticarial reactions." Also on page 472, same volume, he states, "There is also close clinical relationship between the nitritoid vascular crisis and subsequent gastro-intestinal reaction and the methods advised for the control of acute vascular reaction have decided value in reducing the tendency to gastro-intestinal reaction. We, therefore, regard the parosmia experienced during the injection, the tendency to vascular reaction and the gastro-intestinal phenomena as part and parcel of the same reaction mechanism." In this paper, the nitritoid reactions are treated in an inclusive manner and deal with the immediate and delayed reactions of idiosyncrasy referred to above. The nitritoid crisis per se is an acute vasomotor or vascular crisis coming on immediately and in this paper the term nitritoid vascular reaction is used so as to be more inclusive and to facilitate presentation of the subject.

Nitritoid reactions are one of the stumbling blocks in the program; and while of themselves not fraught with danger of death or serious consequences to the individual patient, will in time cause a number of patients to seek other avenues of escape not calculated to produce the desired results.

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*Read before the Adams County Medical Society, August 19, 1941.

USE OF CALCIUM

Stokes in *Modern Clinical Syphilology* comments favorably on the use of calcium in preventing reactions following arsenical administration. The following quotations are taken from that source: "The wave of popularity which has brought calcium into such therapeutic prominence in general medicine has led to interesting and probably important applications in the control of reactions to antisyphilitic treatment." One might here infer that Stokes referred to studies on calcium balance and healing; studies of hypocalcemia (status calciprivicus); relations of parathyroid (therapy) to calcium imbalance; leg ulcers, chronic gastric and duodenal ulcers, etc.; healing through the oral administration of active parathyroid preparations which change the blood calcium index. MacCullum of Johns Hopkins University and Vines and his associates at Cambridge University have made studies on calcium metabolism and the reaction of the parathyroids. One might presume from their studies that active parathyroid preparations may be useful in some cases of syphilis.

Further quotations from Stokes (pp. 451--452) bearing on this subject are: "Spiethoff and Wiesnack in 1920 used fenil and a 10% calcium chloride solution as preliminary treatment in intravenous injections of the arsphenamines and, likewise, used calcium containing solvents for the drug. Their favorable results in the reduction of toxicity were later confirmed by Stumphe, Jacobson, and Sklarz, by Schumacher and more recently by Gerwig. Gerwig in a group of 24 cases showed that angioneurotic symptoms following injection, rise in temperature, malaise and gastro-intestinal disturbances were particularly favorably influenced by the employment of a 10% solution of calcium gluconate, the neoarsphenamine being dissolved in the contents of a 10 cc. ampoule. The mechanism of action of calcium thus employed is probably complex and not fully understood. At least a part of the effect follows the lines suggested by Frei, Nathan Munk, Krowarz, Luitheln, Chiaria, and Januschke and Klauder, and Brown in influencing the background of anaphylactic reaction, the vasomotor phenomena of arsenical complications and the calcium potassium balance of the skin in which calcium plays the role of sedative." Stokes further states that he found *also* that calcium has been beneficial in cases of dermatitis. In one case of arsenical dermatitis in my series, the itching stopped completely after using calcium-hydroxide (lime water) in this case. J. O. Bower and H. A. K. Mengle reported two deaths following the administration (intra-musclar) of digitalis and the intravenous injection of calcium gluconate or chloride. They found that when calcium is given to a digitalized dog, a sublethal dose of calcium gluconate produces definite toxic effects on the heart and may even produce sudden death. To give digitalis after the administration of calcium is less dangerous, because of the slow action of digitalis. Stokes states that "if the drug is given intravenously, the rate of injection should be extremely slow to avoid the disagreeable flushing, and possibility of capillary emboli." These reactions are alarming to the patient. I had one reaction of this type in a meningeal neurosyphilis case. These statements are added here because of their obvious value. Here a quotation from Hare's therapeutics seems to be indicated. "Lime water, when given internally, acts as an anti-acid and is of value in the excessive nausea and vomiting often seen in adults and children. Teaspoonful doses of milk and lime water, equal parts, will often be retained by such patients when nothing else will remain in the stomach."

In our clinic, calcium gluconate, calcium lactate, dicalcium phosphate and lime water were used in a series of cases. Because of the expense of calcium gluconate, even though results were good, it was found too expensive for routine use. The results with calcium lactate and dicalcium phosphate were not as good as those when using lime water. Possibly the price was prohibitive and the patients did not take it when they said they did.

The plan found to be most efficacious, when a patient stated he had a nitritoid reaction, was to give a heavy metal on that date and advise him to take a teaspoonful of lime water three times a day for one week. After following this régime, 80% could and did tolerate full doses of the arsenical. They were advised thereafter to take lime water only the day before treatment and the day on which they took the injection. A few patients were benefited by adding a low carbohydrate diet. Due to the economic status of the patients attending our clinics and to keep from adding too many penalties, no definite diet was ordered at the beginning of an arsenical course, except to omit the meal preceding the giving of an arsenical. Due to the availability of lime water in all cases, it has been proved to be a definite help in reducing nitritoid reactions. About 90% who had nitritoid reactions of varying degrees were benefited.

This paper, however, is not written for any ultra-scientific purpose but merely presents a practical observation that I have found beneficial. Nitritoid reactions are the *bete noir* of syphilologists everywhere, and if the simple use of lime water helps only a few cases, this paper has some value.

The material used and studied in this paper is from the Caddo-Shreveport Health Unit, Shreveport, Louisiana, and the Adams County Health Department, Natchez, Mississippi.

SUMMARY AND CONCLUSIONS

Lime water has been suggested to reduce nitritoid reactions.

Other calcium preparations have been discussed.

Economy suggests value of lime water in preventing nitritoid reactions.

BIBIOGRAPHY

Stokes—"Modern Clinical Syphilology"
Harrower—"Practical Endocrinology"
Fantus—"Year Book of General Therapeutics"
Hare—"Practical Therapeutics"

The Salivary Glands As Related To Otolaryngology

G. G. ARMSTRONG, M.D.
HOUSTON, MISS.

WE FIND very little in the literature of otolaryngology contributed to the salivary glands. Yet those of us doing this work are frequently confronted by overlapping factors, and are probably most often called upon to treat their affections.

Case 1. DEAFNESS FROM EPIDEMIC PAROTITIS. Female, age 30, married. Total bilateral deafness since having epidemic parotitis two months previous to examination. Hearing was good up to that time. Had one attack of vertigo while convalescing, none since.

Examination.—A rather robust healthy appearing woman. Tuning fork tests showed there was neither air nor bone conduction. Equilibrium good and no nystagmus. No other tests were made. A report one year later was that she was totally deaf. The few cases of which I have noticed reports are totally and permanently deaf and usually bilateral. My information is that it is supposed to be due to sensitivity of the auditory nerve to the virus of mumps and that there is no treatment.

Case 2. ABERRANT SUBMAXILLARY SALIVARY GLAND IN TONSIL FOSSA. After removing a left tonsil, then looking back into the fossa preparatory to tying bleeders, I was surprised to find it almost filled by a smooth gland without its fascia capsule. Manipulation revealed its anterior inferior surface deeply embedded and on tension. It was obvious that something should be done with it. So a wire snare was placed over the gland from above, passing downward and gradually tightening until its pedicle, which proved to be the salivary duct, was blindly reached and severed. It was buttonholed through the constrictor muscle. The fossa was very deep inferiorly, but smooth with a thin fascia lining. The pathologist reported aberrant submaxillary salivary gland of normal structure.

The patient was a male, age eleven, with a history of frequent tonsillitis, mouth breathing and underweight. Examination showed moderately hypertrophied, loosely attached tonsils with caseous crypts, indications of considerable hypertrophied adenoid and mild cervical adenopathy. No other abnormality noted. Recovery as reported bv his physician was uncomplicated and complete.

I do not know of another aberrant salivary gland of normal structure reported, though I have not made complete search of the literature.

Tillotson[1] reported a similar occurrence, except laboratory examination showed mixed tissue and the entire gland could not be removed. Freedman[2] reported mixed salivary gland tumor in the tonsillar region simulating peritonsillar abscess. Others report mixed tumors of salivary gland tissue in the tonsillar fossae and other regions of the pharynx originating from wandering embryonic cells.

CALCULI

Calculi of the salivary glands and their ducts are not infrequent, and may cause considerable pain, mental distress and suppuration.

Pain, usually at the location of the calculus, is not constant, unless the calculus is large, causing obstruction or infection, increasing at mealtime, and referred to the ear, tongue, or throat according to the gland involved. So it may be misleading. I have had patients with cancer phobia from pain in the tongue, over a long period, due to stone in the submaxillary duct, and have had simulated chronic tonsillitis from stone in the submaxillary gland.

Case 3. A little girl, age twelve, reported to me for the removal of a calculus which had made its own diagnosis and had almost completed its own operation. She gave a history of having what was thought to be tonsilitis at frequent intervals, for seven months, on the same side. Examination with a probe through the wound revealed a stone which was fairly easily delivered. It was rough, round in contour, and about the size of a small cherry.

Diagnosis of calculi may be made from the history, palpation, probing, and x-ray. Probing is not only valuable in eliciting grating sensation and point of obstruction, but when held in place, helps to maintain fixation, is a guide to injecting an anesthetic and making an incision for stricture or removing calculi.

INFECTION

The most common and one of the most serious affections of the salivary glands is infection.

A certain percentage of the deep phlegmons of the floor of the mouth have their origin from breaking down of the submaxillary and sublingual glands. Colp[3] reported some cases showing their origin to be in these glands, and advocated the removal of the submaxillary gland as a safety measure to insure proper drainage when there were indications that the infection had spread to the deep salivary space. My experience has been limited to one case of this type.

The general opinion is that infection gains entrance into the salivary glands through their ducts in a large majority of cases. Local or systemic conditions which cause diminished secretion of, or obstruction to free flow of saliva are contributing factors. The only drainage way is through the ducts. So it is obvious that they should be kept open.

On inspection we may see their orifices discolored and swollen, and by massage or probing obtain thick secretion, exudate and perhaps pus.

TREATMENT

The usual external applications are of little benefit. X-ray treatment is on the wane. There are some good reports from the use of radium. Gentle massage may be of some benefit. But it seems to me the logical treatment is by dilatation and irrigation. I have been impressed by the rapid subsidence of pain and swelling in some of these acute and recurrent inflammations treated by this method. My experience has been limited to only a few cases, but over a period of years I can recall several which recovered without incision of the gland. Benefit could not be expected in far advanced suppuration, if the parenchyma should be infected primarily or if the gland contained a large stone.

Should external incision be required the occasional passing of a probe through the ducts will aid in preventing salivary fistula. Entering the orifice of the salivary ducts is not always an easy procedure, and requires knowledge of the anatomy and some practice. To pass a probe through the parotid duct, pull the cheek forward. This puts it on tension which is necessary to straighten out its curve over the masseter muscle, and permit easy entrance into its orifice. Occasionally the punctum of the submaxillary duct will have to be anesthetized and held by forceps or slit to be entered. Wiping the area dry and magnifying will aid in locating the orifices in some instances.

Lachrymal probes and cannulae are the principal instruments used by me, and normal saline, boric acid and 2% to 5% neo-silvol solution for irrigation. There is no pain, only a little feeling of pressure from the irrigation, and seldom any reaction. As drainage is the principal purpose in acute cases, probably normal saline solution is to be preferred.

Acute cases may be treated at one- to two-day intervals. One to three treatments are usually sufficient. The same will apply to recurrent cases except they may require a much longer period with gradually lengthened intervals. For chronic inflammations lipiodol may be used as a therapeutic measure in addition to diagnostic study, as suggested by Pyrah[4] in a report of two cases of chronic parotitis cured by weekly instillations of ½ to 1 cc. When the gland is chronically hypertrophied my best results by this or other methods have been only temporary relief.

Sulfathiazole is perhaps indicated to begin with, as staphylococci are reported most often to be the infecting organisms. This may be changed if a specimen and culture show different predominating organisms.

Hygiene of the mouth and upper respiratory tract should be practiced.

REFERENCES

1. Tillotson, R. S., California and Western. Med. 1930.
2. Freedman. A. O.. Arch. Otolaryngology. July. 1926.
3. Colp. R.. Am. Surg.. 1925.
4. Pyrah. N.. Brit. J. Surg.. Jan. 1933.

DISCUSSION

RR. S. B. CARUTHERS (Grenada): Dr. Armstrong has ably presented a very important but rather neglected subject. By training otolaryngologists should be better equipped to care for affections of the salivary glands than other medical men, but I think we have slept on our rights and let the general surgeon have most of them.

Four years ago a negro man thirty years old came to me complaining of unilateral deafness coming on during an attack of mumps. Tuning fork tests showed deafness in his right ear for air and bone conduction. The left ear was nearly normal. Last week I contacted him and made an audiogram. The total unilateral deafness still prevailed. This coincides with Dr. Armstrong's statement that deafness from the mumps virus is total and permanent. I have had no other case like it. Neither have I seen an aberrant salivary gland in the tonsil fossa such as he reports.

In my seven years of private practice I have had about seven salivary calculi, six of the seven involving the submaxillary gland, one the sublingual and none the parotid. One of these was extruded spontaneously by massage on the patient's part, the others requiring surgical removal. One man had been treated in a neighboring large city by a well known otolaryngologist with an erroneous diagnosis of sinusitis as a cause of his submaxillary swelling and pain. Removal of the calculus relieved all his symptoms.

It happens that my cases of infection of the salivary glands have involved the submaxillary and sublingual glands in association with calculi, and have not involved the parotid glands without calculi.

The infections associated with stones have responded to their surgical removal. Infection in the parotid gland have responded to dilatation, expression, and chemotherapy with the sulfanilamide group. I think the x-ray treatment has a very definite place in the treatment of these cases. In the acute fulminating cases x-ray treatment has immediate beneficial effect on the swelling and pain, and in the recurrent cases it helps to prevent reinfection. One of my cases was in an old man about seventy years old with an acute onset of high fever with pain and swelling in the left parotid region. He was very ill. Gentle pressure on the parotid brought thick creamy pus from Stensen's duct. The smear and culture from this showed pneumococci, no other organisms. He was given an immediate x-ray treatment, started on sulfapyridine and the parotid gland was stroked forward to keep the pus expressed. In twelve hours he was much better and made an uneventful recovery. There was a purulent discharge for several weeks and a mucoid discharge for several months from this gland. Further x-ray treatmen or future dilation would have probably cleared it up sooner but he was feeling all right and did not want any more treatment.

I want to thank Dr. Armstrong for bringing this subject before us.

DR. WILLIS F. COTTON (McComb): Dr. Armstrong is to be congratulated on bringing us a paper on a condition seen frequently enough to warrant more careful consideration than has been given in the past, judging from the small number of cases reported in the literature.

Probably the best work on the etiology and pathology of the salivary calculus was done by Soderlund and Naeslund of Sweden. Soderlund definitely associated salivary calculus formation with actinomycetic infection. He examined the calculus formation in forty-one cases, all of which showed the presence of actinomyces. These writers believe that the germs cause a decompensation in the protein of the saliva, which precipitates the calcium salts deposited around the clump of germs.

Later Naeslund examined fifty cases of salivary calculus and found actinomycetic infection in all of them. He was also able to produce salivary calculus experimentally with this same strain of germs taken from the stones that had been removed.

We should always suspect salivary calculus in a case having a history of repeated attacks of swelling and pain in the region of one of the salivary glands or ducts. Painful, submaxillary swelling, more painful when swelling, and swelling larger at meal time, patient able to open the mouth without effort and finally the use of the x-ray should confirm our diagnosis.

There have been many more cases of salivary gland infection in my office than there have been calculi.

Since we have learned to use sulfanilamide in the acute cases along with the other remedies that have always been used, I find the majority of these cases very easy to handle. In the early cases, I use the same method of treatment described by Dr. Armstrong, namely, irrigation and dilatation. Frequently, one will find that the swelling will soon begin to disappear following the use of a small probe in the duct. In my limited experience, I find that when you have a gland in which we have suppuration that healing is faster and much more satisfactory in the cases in which I wait until the suppuration is complete before drainage is attempted.

Fortunately for me and the patient, I have never had a case of deafness following an attack of epidemic parotitis.

Abdominal Wounds*

J. P. FATHEREE, M.D.
WEST POINT, MISSISSIPPI

SUCH A BROAD subject necessitates a general discussion without any great elaboration on any one particular organ or type wound. I shall endeavor to present at least the fundamentals in the etiology, diagnosis, prognosis, and trend of treatment of abdominal wounds.

A wound may be considered as a traumatic injury resulting in the solution of continuity of a free or potentially free surface. The general classification of wounds may be stated here as internal and external. Under these two headings the various types are placed.

1. ABRASIONS. These are the most frequent of the superficial wounds and result from glancing blows, dragging injuries or frictions of various kinds causing a denudation or removal of the superficial layers of the skin. The deeper structures are not disturbed and the interpapillary pegs of the germinal layer are intact. Epithelium is immediately regenerated from these pegs and the epithelial edges at the periphery of the wound.

2. INCISED WOUNDS. These result from contact with sharp instruments such as knives, glass, smooth edges of metals, and the like. The characteristics of this type wound are minimal tissue damage, profuse bleeding and wide gaping. When clean and approximated, healing by primary intention usually occurs.

3. PUNCTURE WOUNDS. These result from stabs with icepicks, knives, nails or bullets. The wounds are frequently deep and may do damage to nerves, vessels and viscera. The surface opening is small, thus making these wounds an ideal culture tube for anaerobic organisms.

4. LACERATED WOUNDS. These result from trauma caused by blunt instruments, lumber, dull knives, broken glass, irregular metal edges, barbed wire and the like. They are characterized by irregular edges and involvement of adjacent tissue. This type wound often involves the viscera. Under this type one must distinguish between contusions which have much devitalization of adjacent tissue and gunshot wounds, especially lead bullets which mushroom when they strike the resistant tissue and subsequently cause more trauma. Contamination and infection from gunshot wounds is frequently due to the impaction of clothing into the wound. High velocity projectiles are sterilized by the heat of friction in passing through the barrel of the gun or the air. Steel bullet injuries more justly fit under

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*Read before the Northeast Mississippi Thirteen Counties Medical Society at Aberdeen, Miss., Sept. 9, 1941 classification puncture wounds.

Hanchett classifies non-perforating wounds into two groups: 1. simple contusions or concussions, and 2. contusion with visceral damage.

In practically all cases of abdominal injury the early picture is that of shock. The "breath is knocked out." Whether this is a result of blood loss, peritoneal stimulation, or direct stimulation of the sympathetic nervous system, the celiac plexus, we shall not consider here. The face is pallid, there is anxious expression, the skin is clammy, respiration is shallow and fast, temperature is subnormal, pulse is feeble and rapid, blood pressure is low, pupils are dilated, eyes are expressionless; there may be nausea and vomiting or either; there is protective rigidity of the abdomen and decreased peristalsis. The usual sequence of events most pertinent to the physician are immediate recovery in cases without visceral involvement or a progressive exaggeration of these signs and symptoms in cases with visceral involvement.

In general it may be stated that circumscribed trauma usually affects the gastro-intestinal tract, pancreas, or kidneys, while diffuse trauma is evidenced more frequently by hepatic or splenic lesions.

The shielding of the kidneys in the paravertebral gutter protects them from anterior trauma to a large extent. The intestines and pancreas are most likely to be struck and compressed against the bodies of the vertebrae resulting in much trauma, possibly a complete severance of the structure. Another factor that is contributory to hollow viscus injury is its content at the time of injury. Distention is most likely to increase the probability of rupture.

In 140 cases reviewed by Lewis of which 95 were analyzed, 75 per cent showed involvement of solid viscera. Beekman reviewed 59 cases which showed 60 per cent viscera involvement and 10 per cent hollow viscus affected. Hinton reported 84 cases showing 78 per cent with solid viscera involved and 22 per cent for hollow viscera. The relative infrequency of hollow viscus injury is easily explained by its pliability.

Liver injuries result most frequently from blows by blunt or hard surfaces in the upper abdomen, especially the right upper quadrant, falls from some height landing on the feet, buttocks, or abdomen, and by being run over. Eliason has noted this latter lesion is more frequent when the course of the vehicle was from right to left. In practically all cases the liver capsule is torn, exposing the friable liver parenchyma to damage.

Provisional diagnosis of hepatic damage may be from history of trauma, signs of abdominal bleeding, tenderness and rigidity in the upper right quadrant and abnormal dullness on percussion over the usual course of the transverse colon. Bradycardia, and shoulder pain, especially right shoulder, are common symptoms. These may or may not be present. Treatment depends on the activity of bleeding or bile spillage. If such conditions exist, surgical intervention is the only treatment. The wound is closed with mattress sutures. Skeletal muscle may be crushed and packed into the wound or gauze packing may be required. Gutta percha drains may be used to drain the bile from the laceration. The cases of subcapsular hematoma are treated conservatively, being observed closely and constantly. The prognosis in these cases is dependent upon early diagnosis, control of hemorrhage and prevention of complication.

Splenic injuries frequently accompany liver injuries since they result from similar trauma. The left upper quadrant is of course most vulnerable for splenic involvement. Shock and evidence of profuse intraperitoneal hemorrhage are the most conspicuous features. Abdominal pain and rigidity most marked in the upper left quadrant are common in all these cases. Dullness in the left iliac fossa, increased pulse rate, low and progressively decreasing blood pressure are frequent. Left shoulder pain and vomiting may be present. Dullness to percussion over the area of the descending colon is usual. These injuries are sometimes slow in causing alarm. Small but constant bleeding from a small lesion may fail to attract attention at the time of injury and such a possibility must be kept in mind. In the cases of severe splenic injury great difficulty is had in controlling the primary shock. Surgery is the accepted treatment in these cases. Lewis and Ridgeway prefer splenectomy to attempted repair of the rent or tamponade. Suturing is frequently impossible and impractical and secondary hemorrhage too often follows tamponade. Massive hemorrhage in splenic injuries occurs weeks after injury occasionally and frequently presents a complication more difficult to diagnose and more dangerous than the original injury.

The pancreas is not so commonly injured because of its anatomical location. If there is trauma sufficient to rupture its capsule there will be extravasation of the pancreatic ferments resulting in a chemical peritonitis. This condition causes extreme abdominal rigidity. It is seldom diagnosed, however, until the abdomen is opened and the fat necrosis of the omentum and other structures noted. If the capsule is not ruptured a hematoma may be present. This hematoma may resolve spontaneously or become cystic (the pseudo cyst of the pancreas). This lesion causes little pain, the tumor mass is palpable, does not move with respiration, and with the history of trauma a provisional diagnosis may be made. Treatment of capsular rupture is closure of the tear, leaving drains in down to the injured tissue. The treatment of the pseudo cyst is marsupialization of the cyst.

Kidney lesions most frequently result from posterior or lateral trauma. The diagnosis is usually made from the history of trauma in the area, pain and tenderness in the loin, and blood in the urine that comes from above the bladder. Treatment of these cases may be suturing of the tear, immediate nephrectomy, or packing with the application of a clamp to the kidney pedicle with subsequent nephrectomy.

Conservative treatment is by far the best, but evidence of increasing or serious hemorrhage demands immediate surgical intervention.

Bladder injuries are the result of low abdominal trauma, especially pelvic fractures. The injury may be extraperitoneal or intraperitoneal rupture. This injury should always be expected when accidents occur early in the morning or following drinking parties, because there is most frequently a full bladder at these times.

Diagnosis is made by finding blood in the urine. Strangury and low abdominal pain are frequent symptoms. Intraperitoneal rupture simulates rapidly spreading peritonitis while extraperitoneal rupture causes swelling in the suprapubic region and at times the inguinal regions. A more positive diagnosis is made by instilling sterile water of known quantity into the bladder through a catheter. Failure to recover the volume instilled is indicative of bladder rupture. Lipiodol or sodium iodide may be injected into the bladder for x-ray studies. The plates will show bladder contour and spillage if present. Treatment is immediate closure of the tear.

Perforation or rupture of the gastro-intestinal tract frequently results from circumscribed trauma, pistol or gunshot wounds, blows from bricks, stones, kicks or being run over by an automobile. In frequency the small intestines are injured most often, the big gut next and the stomach last. Bursting rupture is sometimes present and usually presents a rather long rent. The history, with signs of gastro-intestinal tract involvement, nausea, vomiting, decreased peristalsis, ileus, with x-ray evidence of gas in the peritoneal cavity, will establish the diagnosis. Perforation of the stomach or colon results in the immediate presence of gas in the cavity, while small gut lesions do not show large quantities early. Treatment is immediate laparotomy with closure of the tear or resection of the involved gut.

According to Lockwood the intestinal contents seldom escape into the peritoneal cavity for six hours after injury.

Surgical emphysema is not an uncommon occurrence, resulting from a retroperitoneal rupture of the duodenum or colon. These cases carry a poor prognosis because of infection. Prognosis of other G. I. tract injuries varies with location. The higher the lesion the lower the mortality and the lower the lesion the higher the mortality. This is obviously due to the bacterial content of the injured gut. The chemical peritonitis due to gastric perforation causes severe symptoms but is a relatively sterile peritonitis as compared to the microörganismal peritonitis that results from colon injuries.

Infrequently the gallbladder may be perforated or ruptured. These cases are rare and, while a bile peritonitis is present, they may run for weeks before the jaundice due to the absorption of extravasated bile from the peritoneal cavity makes the diagnosis apparent.

Severance of the common duct almost never occurs but findings would be similar to gallbladder rupture.

Other abdominal injuries that occur and which tax the diagnostic acumen of the most skilled are hematomas. These may occur in any region. They may be subcapsular in liver, kidney or spleen. They may be subserous in the G. I. tract, or they may be retroperitoneal. The diagnosis is difficult. An acute abdomen is present but surgery is a liability. Close observation and conservative treatment consisting of Fowler's position, Wangensteen suction, intravenous fluids, transfusions and sufficient sedatives for rest will give the best results.

Injuries that may occur to the vascular system such as severance of vessels or thrombosis are most frequently diagnosed after laparotomy has been performed. The prognosis in these cases depends on the extent of shock and the sterility of the exposed tissues.

Minor injuries to the abdominal wall fall into the general classification of wounds and should be treated according to their bacteriological content. Sterile wounds, being wounds under aseptic conditions, are to be closed at once. Contaminated wounds, being produced under other than aseptic conditions less than eight hours prior to treatment, should be dehided and closed unless the operator has cause to believe the dehidement has not been sufficient to assure asepsis. Infected wounds, being contaminated wounds of duration longer than eight hours, should be left open and irrigated frequently with Dakin's solution, or similar fluid, until three daily cultures are negative. They may be closed when and only when there is proof that microörganisms are present.

The fundamental treatment of all wounds, especially abdominal wounds, is to stop the bleeding, treat the shock, then remove the condition causing the difficulty, as closing perforations, ruptures of the hollow viscera and repairing tears in the solid viscera. Prescribe rest, and transfusions if excessive blood loss has been suffered. Maintenance of fluid balance, splinting where practical, heat, and high caloric diet if tolerated are most important. Operation is imperative in all ruptures of hollow viscera, rupture of the spleen and of lower abdomen and kidney with signs of profuse hemorrhage.

Surgery should not be undertaken during shock. The optimum time for operation is immediately following primary shock.

Close observation, a tendency toward conservatism, and prompt action in response to surgical demands will do much to increase the satisfactory results in cases of abdominal wounds.

Facts, Fads, and Fancies*

DR. G. S. BRYAN
AMORY, MISS.

MEDICINE IS NOT, and perhaps may never be, a fixed science in the sense that mathematics is. However there are some medical facts that are so well established that there can be no doubt concerning them, even though explanation may de difficult. Many of our most useful and dependable therapeutic measures are based on empiricism. Those of us who have read Dr. Howard W. Haggard's *Mystery, Magic and Medicine* can the more easily understand the confusion and uncertainty that surround many questions that arise in the field of medicine today. There is so much of mystery in nature that one need not wonder that a cloak of mystery enveloped every step in the early development of medicine, now acknowledged to be the most progressive branch of science. Yet the very foundation stones—the fundamental facts that underlie medical science—are profound mysteries. I refer to life and death. No one has ever been able to explain these great physiological facts because no one has understood them.

What is life and what is death? Speculate all you will and no acceptable answer can be given. It has been said that life is positive while death is negative, that death is simply the absence of life as darkness is the absence of light, as cold is the absence of heat. Again it may be claimed that both are positive principles and that they are coexistent; that we begin to die the instant that we begin to live and that we cease to live the instant we cease to die. One great fact that is not stressed or even recognized in medical thinking is that health is inherent to every normal being and that disease is simply a departure from normalcy. Disease is dependent on one of three causes: heredity, enviroment or of living. If one could choose his ancestors for several generations back, heredity might be removed from the equation. We can do and are doing much to overcome the risks from environment. Habits of living may never be improved. One great and important fact that needs to be realized and kept constantly in mind is that there are no specific cures, *per se*, in medicine once disease has been established. Recovery from disease depends, primarily, upon biochemical processes. Certainly these processes can be furthered, perhaps initiated, by therapeutic measures. But let us not forget that our best and most scientific efforts are but *aides* to natural processes. At long last we are beginning to learn that the human animal is a dual entity, that he is a psychosomatic entity. The psychic and bodily functions are so correlated and interrelated that they must needs be considered jointly if we may hope to render service to the sick. It is very much to be regretted that many doctors, failing to consider this basic fact, undertake to relieve all complaints and physical symptoms by direct medication or, in many instances, resort to surgery when both the symptoms and pathology are purely psychic.

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*Read before the Thirteen Counties Medical Society at Houston, Miss., Dec. 9, 1941.

It is my belief, based on a rather long period of medical practice and a close and conscientious study of my cases, that a very large percentage of patients who have consulted me have suffered from psychic rather than physiological upset. Every doctor should know that psychic disturbance produces marked change in the function of the gastrointestinal organs. Again who of you has not seen cases in which the fear that pregnancy might have occurred from a single indiscretion, prevents menstruation for months and when the girl is assured that she is not pregnant, menstruation is promptly resumed? I do not doubt that many of you have seen cases of phantom pregnancy that were calculated to deceive the very elect. I could relate some interesting cases of this nature. I once heard W. J. Mayo say that he was sure that at least sixty per cent of appendectomies are needlessly done, that in many of these the symptoms are due to pyschic upset. However, it is now believed (and I concur in this belief) that many of the cases in which early operation is done and the appendix is found edematous but not inflamed, that the patient is allergic and the appendiceal mucous lining is affected very much as that of the nose in certain cases. In such cases a differential blood count should be very helpful in arriving at a correct diagnosis, for in all probability the eosinophils rather than polys are likely to be increased.

My point is this: While appendicitis is one of the most important facts in surgery, appendectomy has come to be a surgical fad. I did the first laparotomy that was done for removal of the appendix in north Mississippi —perhaps the first one in the entire state. This operation was both necessary and a success, although the diagnosis was wrong. I found a diverticulitis rather than an appendicitis. However, the operation proved to be a life-saving measure. Soon I became a faddist on the subject of appendicitis and did many unnecessary appendectomies. It is true I acquired some reputation and collected some nice fees. Besides this the public was oversold and became faddist too. Appendicitis is a fact and appendectomies are absolutely live-saving and should not be witheld when needed, but please let us not discredit the operation and the profession by needless surgery.

All that is true regarding appendectomy is more than true regarding gallbladder and pelvic surgery. Once the female pelvis is invaded needlessly by the surgeon there is no hope for that woman. She is an addict and will never stop the habit. And so long, it seems, as there are women to mutilate there will be pseudo-surgeons to accomodate them. In the field of internal medicine the scope for faddism is infinitely more limitless, though not so spectacular. I am a firm believer in avitaminosis. But I, also, know that the widespread prescribing and use of vitamins as sold in drugstores are fads that have swept both doctors and the public off their feet.

Certainly no one can be found who is so cranky or foolish as to deny that hospitals and hospitalization are important and necessary, but I am sure that faddism enters into this equation too. Certain emergencies and lack of proper home equipment demand hospital facilities. In every case of indigency where it is impossible to give the sick proper environment and care, the hospital is indispensable. But in rural communities this is out of the question. These people must suffer and die for want of proper care. Only such care as the country doctor can give in pure charity is available. But I am sure that where proper food, good nursing and capable medical supervision can be provided in the home it is better to keep the patient there. The well-appointed home is the place where people should be born, should be sick and should die. Those who need hospital care seldom get it; those who get it seldom need it. One great medical fact is the urgent need for capable doctors and nurses who are willing to go into the rural districts to live and to work. The people who live in these sections need and are pleading for medical care. They must and will get it. Perhaps state medicine and regimentation will be the answer and solution. No one hates the prospect worse than I do, but we must face facts as well as fight fads. Is there not some way to induce our young doctors (some of them) to enter this field? Why do they hesitate and refuse to do so? Surely some of them realize the need for them to do so and surely some of them are possessed of the humane and missionary spirit. Is it possible that they realize their incompetency and lack of fitness for this great work? I have maintained that the trouble is in faulty methods of teaching. I have realized that I am making myself obnoxious to some by this insistence. But facts are facts and must be defended. I was pleased but surprised to notice that in Harvard a course has been established and listed as "Teaching Medical Students That Patients Are Persons." When and if our medical students shall have been taught this fact, a brighter day shall have dawned. But at present our prospective physicians are taught to regard a patient simply as a number, and their conception of the case is based on the observation and report of a high school girl who is, herself, in "training."

Is it any wonder, then, that these fine and brilliant young fellows are afraid to risk themselves outside the walls of a hospital and under the sustaining influence of a "female in uniform"? Don't misinterpret me: I doff my hat in the presence of a capable and well trained nurse. To her belongs and should go more than half the glory of every hard fought and well won medical victory over trauma and disease.

What are fancies? Of what material are they composed? What would this world be today if no man or woman had ever let fancy go free? We were told in Holy Writ that our men shall dream dreams and our young men shall see visions. How thankful I am that this prophecy has come true. How thankful I am that dreams and visions of the past presaged and made possible the wondrous facts that have already been proved, not to mention others that will yet come true! In my thinking the sphere of medical possibilities is more limitless than the ether that surrounds our globe. I would not for any price place an obstacle in the way of those who dream, for what any man can imagine some man can do. And just here I will dare to censure our older men of medicine. Why do they loaf on the job? Why do so many of them cumber the field? I do not wonder that our young men seem to think that they are supermen and that their fathers are barnacles that slow down the speed of the vessel. Byron made Conrad use these words when he embarked on his career of crime, "As far as the breeze can bear the billow's foam, survey my empire, behold my home." When I read those words, though I was but a lad, my soul bounded within me and I felt the urge of effort and of freedom. We talk of freedom, then why are we content to be slaves? To our young men I would call attention to your shortcomings and warn you of dangers that lie out before you, but I bid you Godspeed and throw you the torch, knowing full well that you will carry on and in the end will reflect glory to yourselves and, perchance, rise up and bless those who have gone before.

Let Them Lie!*

A MANUAL OF FIRST AID FOR MOTORISTS

LET THEM LIE

This manual on first-aid for motorists was prepared by Dr. H. Earle Conwell of Birmingham. Dr. Conwell is chairman of the Committee on Accidents and Industrial Health of the Alabama State Medical Association. *The Birmingham-Age Herald* was the first to publish this article. Mrs. Margaret Putman was active on the service of the paper. The Jefferson County Board of Health and the WPA lent their aid in giving it circulation. You may not agree with all that is said, but it certainly has a lot of sound doctrine and advice in it. It is timely just now.

Article 1.

A series of articles dealing with highway accidents, describing each and telling what to do and not to do in such cases, is being published for your information. It may mean the saving of a life when life in hanging in the balance, when every second counts and everything depends on what you do for the accident victim and how you do it. Will you be prepared?

Excitement, hurry, and improper handling complicate injuries. Rushing a patient to a hospital increases shock which often results in death.

Call the highway patrol: they know what to do in case of accident. Have the doctor or ambulance come to you. Let 'em lie. It will save lives.

Article 2.

Shock—Its Causes and Symptoms

Shock, a great contributor to accidental deaths, is a sudden lowering of the vital function of the nervous system.

Shock is caused by injury or emotion. One may increase the other. You may experience shock by only seeing the accident, while in case of injury, excitement and hurry increase shock. A badly injured person may have very little shock while another receiving only bruises may be severely shocked.

The nerves that control the blood vessels are upset in shock. The arteries are contracted in this disturbance of nerve supply, thereby interfering with the blood supply to the brain and to the surface of the body.

In severe shock, when too little blood reaches the brain, death occurs.

This condition is not dependent upon the number of bones broken but the effect on the heart and brain when the blood supply is blocked.

You may recognize shock by a moist or dripping-wet skin. The patient may be cold and clammy regardless of the weather, his pulse will be rapid, he usually will not be thirsty and seldom complains of pain even though he may have a bone broken.

If he insists he is feeling fine and is restless—be careful—then is when shock is often more severe.

Remember, always notify the highway patrol when an accident happens.

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*Prepared by the Committee on Accidents and Industrial Health, Alabama State Medical Association.

ARTICLE 3.

Shock and How To Control It

Shock is the most serious result of an accident and causes more deaths than all other causes combined.

Shock can be controlled though, and many lives saved.

To control shock: Stretch the patient out flat on the side of the road with the head lower than the rest of the body. Cover him with coats, keep him warm, quiet and still. If possible, give him coffee, or its equivalent.

Cushions from the automobile make a warm, soft bed for the patient. Keep him there until shock is controlled, but if the weather is bad he may be moved to a nearby shelter. Call for medical aid immediately.

Keep him there until the pulse has slowed and the skin is dry.

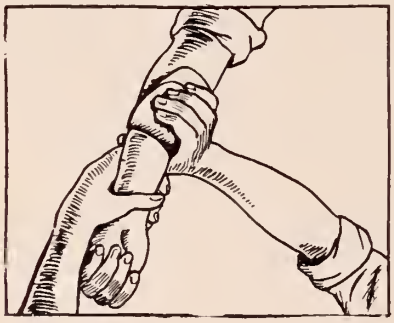
If a broken bone is apparent, keep him there; if there is a severe head injury, keep him there until shock has been controlled or improved.

If he is placed in a car and chilled in a race to the hospital, he may die—a victim of exposure, hurry and excitement.

If the patient is not kept quiet, still and warm, shock will be increased, and he may die on the way to or upon entering the hospital.

Remember, keep him warm, quiet and still —let him lie.

The highway patrol should always be called.



ARTICLE 4.

Shock—Don'ts To Observe In Treating Shock

Never place the patient in a car, open the window to give him chilling air and dash him to the hospital. This increases shock and he may die from that and exposure. It will not be the injury alone that caused his death in such circumstances.

Never attempt to set a broken arm or leg or any bone in the presence of shock. Manhandling increases shock.

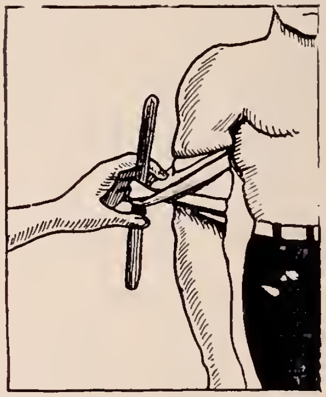
Do not permit anyone else to manhandle the patient; do not permit people to ask him questions, feel his pulse or otherwise annoy or disturb him. Take command, keep him warm, quiet, still—keep his head lowered.

If bleeding is present, stop the hemorrhage immediately, but do not neglect shock.

Place a handkerchief over the wound and use light pressure. Change when necessary. Apply a tourniquet only when the blood spurts. A tourniquet should be released slowly and tightened again immediately every 15 minutes. This allows the blood to circulate beyond the tourniquet, thereby preventing gangrene.

Again, shock may be easily recognized by a cold, clammy skin, state of excitement, rapid pulse and false talking. He may say he feels fine, even though he has bones broken.

Highway patrolmen know how to give first aid.



ARTICLE 5.

Hemorrhage

Hemorrhage may be slight or profuse, depending on the size or depth of the wound.

Blood comes from three sources: It may ooze from the tissues; it may leak from cut or torn veins, or it may spurt from the arteries as it comes from the heart.

Bleeding may stop itself by clotting, which requires from three to five minutes.

Clotting is faster when the blood has something upon which to congeal. A clean handkerchief or a piece of tissue placed in the wound will speed clotting.

When hemorrhaging is present, keep calm and see what type of bleeding it is. If it oozes or comes freely from a vein, place a clean dry handkerchief into the wound and hold it there gently—not tight.

Pressure applied lightly as described will curb bleeding.

If the handkerchief or tissue becomes soaked after a few minutes, apply another one. A few changes, if not too tightly wound, will stop oozing or bleeding from the vein.

A tourniquet must be used when an artery, which pumps the blood from the heart, is cut.

As you probably know, a tourniquet is something tied around the limb above the wound and tightened until the spurting of blood is stopped. You may use your necktie, stocking, belt or anything convenient that will serve the purpose.

To apply a tourniquet, wrap it once around the limb about three and a half inches above the wound and tie well. It is well to place the tourniquet over the clothing to prevent pinching the skin. Then with a pencil or stick as a lever, tighten the band just enough to stop the spurting.

Loosen every fifteen minutes for a short time to permit the blood to circulate in the extremity, then tighten again.

Remember, blood will congeal if given the chance.

ARTICLE 6.

Wounds—Infections

An abrasion is an injury in which the surface skin is rubbed off. This is a superficial wound and does not bleed much.

A contusion is a wound where the skin is not broken but is bruised. The blue-brown color is the result of broken blood vessels underneath.

Cuts are clean-cut wounds through the skin. They may reach any depth and usually bleed more than any other wound.

Lacerations are irregular jagged cuts through the skin and may be deep enough to tear the muscles. Bleeding may be great. Control it as you have been told. Treat shock.

Puncture wounds are caused by an object being pushed or driven into the skin and through into the flesh. Unless a blood vessel has been broken, bleeding will be slight.

Control bleeding and prevent infection.

Infection is the result of germs entering and contaminating the wound. Everything, even the air, is full of bacteria which may enter the wound and set up infection.

You may prevent or limit infection by proper treatment.

Control bleeding, let them lie, treat shock. Call a doctor!

ARTICLE 7.

Treatment of Wounds

Remember, the important thing in the treatment of wounds is first to control bleeding and prevent infection. But don't forget shock.

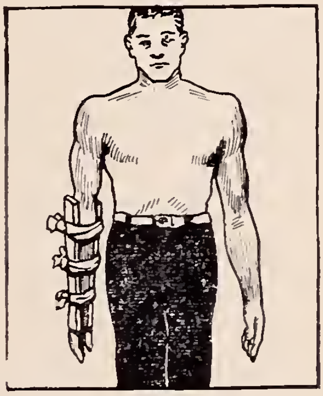
Use a tourniquet for spurting blood, slight pressure for slight bleeding.

Use only clean material to dress or bind the wound. If necessary, the wound may be sponged with water, or soap and water if available. Usually the best course to pursue is do as little as possible to the wound itself. Let the doctor attend to the wound.

Every car should carry a package of sterile gauze; it is cheap, and may save many dollars in an emergency.

Emotion and excitement increase shock. Do not rush the patient to have the wound sewed up. Wounds will usually be ready to heal even within a few hours if kept clean and open so the rush isn't necessary. Hurry is detrimental to the patient.

If necessary, control bleeding, wash off wound, apply dry, clean bandage. Treat shock and let them lie. Call for medical aid.



ARTICAL 8.

Broken Arms—Simple Fracture

A broken arm may be detected by the fact that it hurts badly and any effort to move it increases pain. The patient may be able to bend the elbow or use the hand but will be unable to lift the arm.

You may feel motion between the elbow and shoulder by gently taking hold of the elbow.

The first thing to do is to treat shock. Then prepare to put on a splint, a bandage or sling.

A splint is something tied in place to prevent the broken ends of the bone from moving. Pain is increased by motion and produces greater shock.

A splint can be made of anything at hand that will be firm enough to hold the injured limb steady; a paper folded, a strong branch, perhaps a long, straight tool in your automobile.

Fasten the arm snugly to the splint with handkerchiefs, neckties or strips of shirts, but do not bind too tightly.

If the patient has numbness or the hand swells, loosen the splint to permit better circulation.

These conditions also apply to a bone broken below the elbow, which receive the same treatment as when broken above the elbow.

Learn first aid.

ARTICLE 9.

Broken Elbows

Broken elbows occur frequently in automobile accidents where the passenger or driver rests his arm on the window with the elbow protruding called "automobile elbow fracture." It may be struck by a truck with overhanging side or may be sideswiped by another car.

The safe thing to do is to keep the arm inside the automobile!

In event the elbow is broken a jack-knife handle usually present in any automobile will make a fine splint. Or a bundle of branches tied to the tip of the fingers or a newspaper tightly folded to form a brace. The support should then be tied in place with the elbow held straight.

If the skin is broken and the bone end protrudes, place a clean handkerchief or bandage over the wound and control bleeding as previously described.

See article on infections.

Splint them where they are. Let them lie. Treat shock. Seek medical aid. Call the state highway patrol.

ARTICLE 10.

Broken Arms

A simple fracture means that a bone is broken, without any break in the skin, while a compound fracture means that one end of the bone or bones protrudes from the skin.

A compound fracture is more serious than a simple fracture, because the bone end, the marrow, the tissues and the muscles are exposed to infection by coming through the skin, clothing and perhaps into the dirt. When the bone is drawn back into the skin it carries the germs which may produce blood poisoning. In presence of compound fracture, treat shock.

Apply a tourniquet for a time if bleeding is severe; use gentle pressure with a bandage if bleeding is slight. Apply a clean, dry handkerchief, but do not bind tightly.

Treat shock.

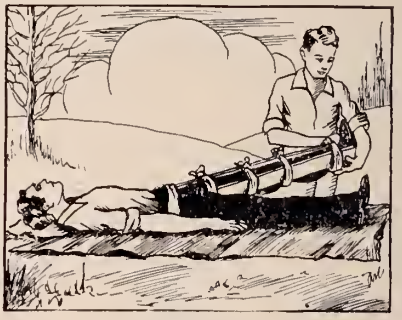
Then apply a splint as before described.

Transfer quietly to a hospital. No need to rush and create excitement for the patient. Shock kills—the bone can wait.

Splint them where they lie.

Treat shock.

Seek medical aid. The state highway patrol can help you.



ARTICLE 11.

Broken Leg or Thigh

In case of a broken thigh or leg shock is severe and sometimes causes death—the broken bone will not kill, shock will.

Simple fracture is a broken bone which does not have a wound opening through the skin. Compound fracture occurs when the bone sticks through the skin.

The victim of a broken thigh will usually be pale and sweating and will suffer great pain when he tries to move the leg.

A support must be applied while the patient is flat on his back. Keep him warm. Use anything available for a splint that will reach from the armpit to the end of the foot; branches, newspapers, anything that can be held securely to the body with belts, ties or strips of clothing. There should be another splint down the front of the leg and on the inner side of the leg from the crotch to the foot. Each should be snugly tied on.

Keep him warm and quiet and wait for a conveyance to take him to the hospital. In the absence of an ambulance, a truck will do very well, as the patient can be laid out flat. His leg can thus be held straight and steady—

with the head pointing to the slope of the road.

Never cram the patient into a car. It may cause the simple fracture to become a compound one. This happens, you remember, when the bone end sticks out through the skin. Chances for blood poisoning and infection will be greater and shock will be increased.

A broken bone will wait—shock kills.

If the hip is broken, the patient will be unable to raise the thigh or cross the legs. The knee will be rolled outward. Treat shock.

Splint them where they lie. Keep them flat. Bring them to the hospital, lying flat, warm and quiet.

Pain is relieved by splinting and shock is lessened.

Remember—shock causes more deaths than all other results of highway injuries combined.

Let them lie. Treat shock and splint them where they lie.

ARTICLE 12.

Dislocated Joints—Shoulder, Elbow and Wrist

A dislocation is where one of the bones forming a joint is out of its normal place. It is more painful than a fracture, and shock is usually greater. You may recognize a dislocation by the fact that any attempt to move that joint will increase pain, motion will be limited, and there is deformity.

If the dislocation is in the shoulder a lump may be felt in the armpit. In this event the patient will be unable to place the hand on the injured side on the opposite shoulder.

Lay him flat, apply a pad between arm and body and bind to the body by means of a tie, belt, or whatever you have handy. This will remove pressure from the muscles.

Do not attempt to pull or jerk the dislocated bone into place, as you may injure the nerves and cause paralysis of the arm or hand.

Remember the damage you may cause—let him lie still.

There may also be fractures of other bones about the joint unknown to you. Remember the damage you may do. Handle him as little as possible.

Lay him flat, place a pad of folded clothing between the arm and chest and gently bind the limb to the body.

Treat shock—splint him where he lies.

Call the doctor.

ARTICLE 13.

Dislocation of the Hip—Knee and Ankle Injuries

Shock is usually more severe in dislocations of the lower extremities than of the upper.

A dislocation of the hip results in the thigh being held partly flexed (bent) and the knee is flexed, turning in and against the other knee. To attempt straightening is very painful.

Lay him flat on his back or on the uninjured side, leaving the thigh and knee bent in the most comfortable position. Bind the lower limbs together with a belt or something, first placing a couple of folded coats between the knees.

Keep the patient warm, quiet, and give him a drink. Treat shock.

Splint them where they lie.

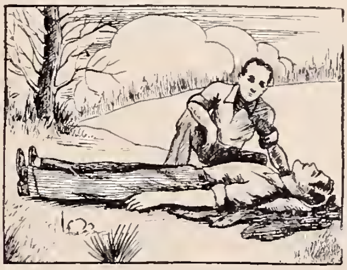
A knee injury is very common in automobile accidents, but a dislocation of the knee without fracture of some bone making up the knee joint is rare. Let the patient maintain the position least painful to him, place folded coats between the knees, and strap lower extremities together with a belt. Never try to force a bent knee into position. Serious injury may be caused in forcing the big blood vessels and nerves in back of the knee. If possible, apply a splint from armpit to foot, fastening it to the body and both legs.

Shock will be severe—treat shock.

Ankle dislocations usually mean the presence of a fracture, so do not try to manipulate. Splint with whatever is handy from above the knee to the sole of the foot on the outside—from foot sole to above the knee on inside. Keep warm, quiet and treat shock.

Splint them where they lie.

Always notify the state highway patrol in case of accident.



ARTICLE 14.

If Neck Is Broken—Let Them Lie

Keep the head straight and hold the chin up. This is the first thing to remember in case of a broken neck.

An injury to the neck bone is one of the most serious of all types and should be treated with caution. Your treatment may result in the patient having a simple broken bone, paralysis, or death.

The neck can be broken by a quick jerk or by being bumped against the top of the car. If the victim complains of pain when the head is moved forward—be careful—regard him as having a possible broken neck. If the arms or legs feel numb or tingly it is probable the spinal cord has been bruised. If the patient can't move the limbs it indicates the cord has probably been severed by being crushed. This happens when one of the vertebrae has been broken and jammed against the spinal cord. Keep the head straight and chin up. The nearer the chin to the chest the more danger of damage to the spinal cord!

Leave them where they lie, place a folded coat or coats under the neck to keep the head straight and the chin up.

If imperative to move him have someone hold his head straight and his chin up. Do not crowd him into an automobile. Do not try to make him sit up—keep him warm, quiet and still until an ambulance or truck arrives to convey him to the hospital. If a truck is used—lay him flat—have something under his neck and keep his chin up. Treat shock. Remember the highway patrol gives first aid.

ARTICLE 15

Spinal Fractures

The backbone is made up of a series of round bones which are flat on top and bottom. Layers of cartilage and groups of ligaments and muscles connect the bones and the spinal cord is found in the back center of these round bones. The cord carries all the nerves from the nerve system of the body.

One of five things may happen when the back is injured.

A bruise or sprain may be present.

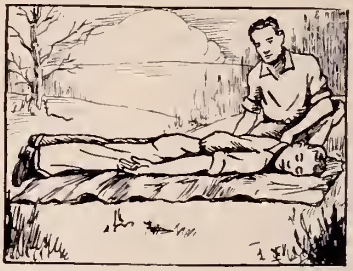
A bony process that comes off the vertebrae may be broken.

One of the round bodies of the vertebrae may be broken.

There may be a displacement between the vertebrae crushing the spinal cord.

Last, the spinal cord may be severed by being pinched or mashed by a break of one of the round bodies.

Treat all back injuries as a fracture—lay them flat—on their backs—a folded coat or cushion underneath—treat shock—seek medical aid.



ARTICLE 16

Fracture of the Spine

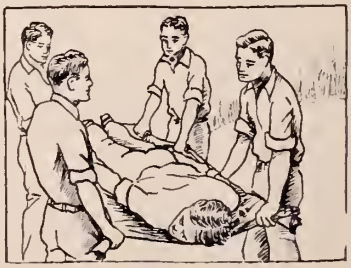
You can tell if there has been an injury to the back in an accident victim by the presence of pain in the region but you cannot tell if there has been a serious injury or fracture unless the spinal cord that carries the nerves has been injured. A doctor often is unable to determine whether there is a fracture until an x-ray has been made. But when the cord has been crushed the patient will be unable to move his legs.

If the patient complains of pain in the back, keep him lying stretched out flat or better still, place him on his abdomen and chest and treat shock. If he is forced to sit up or is placed in an automobile one of the round bodies which may have been broken will slip backward and he will fold up like a jack-knife at the point the bone is broken, crushing the spinal cord.

Crushing the spinal cord is similar to mashing a banana without breaking the skin.

Let him lie, don't attempt to manhandle him. Wait for a stretcher to carry him—lying flat—to a conveyance where he can remain lying flat during the trip to the hospital.

Remember, if a vertebra has been broken, which you don't know, and you move him, causing a jack-knife injury, the patient is liable to be paralyzed for life. The broken bone in the back can heal but the crushed cord never heals. Let him lie—treat shock.



ARTICLE 17

Fracture of the Spine

The proper method to use in bringing the back-injured person into the hospital is to leave him lying flat until a stretcher or blanket can be obtained upon which he is to be rolled and lifted to the waiting vehicle—stretched out and with adequate support to the middle of the back. He must be stretched out flat in the ambulance or truck with a small pillow or pad under the small of the back.

To attempt to lift him by the shoulders and feet will be to invite jack-knifing the spine which will crush the spinal cord. If he is lifted into a blanket, don't let the middle of the back sag as this is where support is most needed. It is better to have the head and feet extend over the ends of the stretcher, or support, than to chance the back being unsupported.

Remember these simple rules and help prevent disabilities.

Leave them where they lie—stretched out flat—treat shock.

ARTICLE 18

Fracture of the Pelvis

In injury to the pelvis, shock is usually severe and is the first thing to be considered in treating the patient. He should be kept quiet, warm and still.

Strap the pelvis snugly with belts or a couple of shirt sleeves put together. Of course, it will be impossible to splint this injury, but much comfort will be felt by the patient if the pelvis is supported by strapping.

Do not attempt to lift the patient as one of the bone ends might puncture a body organ such as the bladder, and involve more serious injury.

Pain will be severe unless shock is so great there is only numbness felt by the injured one. Do not set him up, keep him flat, warm, and quiet. Wait for the ambulance to come to him, and continue to treat shock.

Let him lie, warm and quiet and strapped about the pelvis snugly with belts. The state highway patrol should always be called to the scene of an accident.

ARTICLE 19

Head Injuries

No matter how slight the outward appearance of the head injury may be, if unconsciousness occurs the brain is injured and extreme caution should be observed. Do not move the patient, leave him lie and control shock.

Brain injuries are the result of concussion, contusion, or hemorrhage; when a person is knocked out, it is due to one of these causes, or a combination of two, or perhaps all three. There is no way to tell, a bad scalp wound may be superficial; a wound appearing slight may be serious, so play safe; treat them all as serious and keep the patient still.

Concussion is a shaking up of the brain, but it does not leave after-effects, while contusion is an actual bruising of the brain. Hemorrhage is due to the rupture of a blood vessel in the brain or in one of the brain coverings.

Even in the absence of delirium or extreme restlessness there may be internal hemorrhaging present which would not cause delirium until the pressure of bleeding reached a certain point.

To move them about frequently increases bleeding and causes unconsciousness, paralysis, and sometimes death.

Bleeding tends to clot itself as you have been told previously, so give it a chance to stop by keeping the patient still, quiet and warm.

If weakness shows itself in the face when the patient tries to smile or a leg or arm on one side is weak, it means contusion or hemorrhage, or both may be present. If the patient drifts in and out of consciousness, the situation is even graver, as internal hemorrhage is present.

ARTICLE 20

Head Injuries—Continued

Treat all head injuries as serious.

If the pulse is slow, around 50 or 60 a minute, the brain is swollen from the injury or internal bleeding is excessive, so be cautious. Keep him quiet, warm and still.

If breathing is difficult due to mucus in the throat, turn the face to one side with the head down hill so that it may drain from the mouth. This will prevent the injured dying from strangulation in his own secretions while he is unconscious and unable to cough up the mucus.

When there is bleeding from the nose or ears, the base of the brain has been fractured. There may be a fracture of the skull—with or without a scalp wound. Sometimes there is a crack on the opposite side from the blow due to transmitted force. The concussion or hemorrhage may also be on the side opposite the one receiving the blow. Where paralysis is present on one side of the body, the brain injury is on the opposite side. Paralysis may be total or partial, depending on the amount of the bleeding.

So do not move the patient or allow him to stand, sit or try to walk about; keep him flat, quiet—and, control shock.

If other wounds are present, follow previous instructions, but avoid all unnecessary handling.

Seek medical aid.

ARTICLE 21.

Chest Injuries

In chest injuries shock may be the most serious factor, so keep them flat, head down and feet up.

In event only a rib or two are broken, shock will not be so severe. But if shock is severe and breathing is shallow and fast—be careful.

If the pulse is extremely rapid, if the patient is clammy and pale and spits up blood, you may know he is injured internally. Perhaps the broken end of a rib has pierced the lung or several ribs have been smashed in and a section of the lung crushed. In this case a lot of blood may be spit up by the injured person.

The heart may be bruised in such an injury, or even ruptured, in which event he will bleed to death.

The important thing to do is to lay him down with sufficient cover to keep him warm. Don't pile him into a car and rush in—keep him quiet, warm and let him lie until shock has been controlled and proper transportation secured—preferably an ambulance.

ARTICLE 22

Abdominal Injuries

The abdomen is the largest cavity in the body. It lies between the chest and pelvis and is protected by short thick muscles and the backbone in back and by long thin muscles in front.

The lining of this cavity is like a sac, and contains all the body organs except the lungs and heart. The stomach and intestines are not anchored in this sac; therefore, in the event of a blow to the abdomen these organs, being free, can slide away from the impact. With the liver, spleen, pancreas, and kidneys it is a different story, for they are fixed to the back wall of this cavity and can not escape the impact. As a result these organs may be torn or broken.

When this happens to a person the first thing to consider is shock.

Following this type of injury, internal bleeding will occur. The pain will be intense and the muscles of the abdomen will be held taut. To touch these areas or to move will increase pain.

If the kidney is torn the pain will be localized in the back.

The bladder, if very full at the time of the accident, may be ruptured, even though it is protected back of the front bones of the pelvis. If this happens the pain will be intense in the lower part of the abdomen.

Keep them flat, leave them lie, and keep them warm.

Seek medical aid—transport carefully.

ARTICLE 23

Abdominal Injuries

In answer to what you should do in case of abdominal injuries, remember, lay them flat, keep them still and warm, but do not give them a drink, as that may cause vomiting and increase hemorrhaging. Moving may cause more bleeding, too, so keep them quiet and still. Transport carefully—preferably by ambulance.

A torn internal organ will bleed the same as a wound on the surface, but remember that blood will clot if allowed the necessary time. If you let them lie and keep them still and warm until the pulse becomes slower, the blood will probably clot and the tear seal itself so that bleeding ceases.

Eighty per cent of the deaths of automobile accident victims that die en route to the hospital, or immediately upon reaching the hospital, could be prevented if the patient received proper first aid treatment and not too much manhandling and hurry.

Remember that shock is the first thing to treat. Keep them warm, still, quiet—let them lie do not try to set them up.

Treat shock.

First aid is taught at Red Cross stations. Why not follow this up with a course in first aid?

Presidential Address*

C. M. SPECK, M.D.
WHITFIELD, MISS.

FIFTY-SEVEN YEARS ago what is now the Mid-South Postgraduate Medical Assembly was formed. It was dedicated to free and independent scientific medicine. Our imposing list of twenty-four guest speakers from fourteen states is convincing testimony of its acceptance by the medical profession.

Fifty-seven years ago the Statue of Liberty was presented to this country by 100,000 voluntary patriots from all parts of the Republic of France. It was dedicated at the gateway to this Nation with the proposition that all peoples shall be free. What a tragedy to contemplate that the children of those who gave it are now in political slavery!

We are today engaged in a death struggle to determine whether such independent organizations as this medical assembly and such democratic governments as ours shall longer survive.

During these fifty-seven years of this association's activities, more progress has been made in the science of medicine than in any other field of human endeavor. During my own time of active practice, less than half of this span, I have been amazed at advances in three fields: (1) the laboratory, (2) preventive medicine and public health, (3) mental hygiene and psychiatry.

Both the last and the present world wars have thrown a more intensive spotlight upon the importance of psychiatry, the treatment and prevention of mental ills, than a whole century of inhumane, criminal bungling of antiquated custodial asylums have done.

I had intended to elaborate today upon these three phases of scientific progress, but the war has changed my program, as it has changed and will continue to change everything in America.

All medicine for all time has been dedicated to the alleviation of human suffering. For science now to have its energies turned to destruction is a discouraging contradiction of all the profession's high ideals. Laboratories for healing have been converted by a group of paranoids into instruments of death. Yet the results of research can never be eradicated. Truth will never die. Like Churchill, who said England has not lost a war in 1,000 years, may we say the United States has never lost a war, and the United Nations never will. Yet, more important, may character and efficiency of service be our battle cry as long as sick bodies and minds need healing.

Gentlemen, you, our distinguished guest speakers, have honored us and the profession by coming far at great personal sacrifice to give us the benefit of your experience and wisdom. We are eager to hear you. The program is yours.

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*Delivered at the fifty-seventh annual session of the Mid-South Postgraduate Medical Assembly, Feb. 10-13, 1942, Memphis, Tenn.

The Patient – His Disease and Personality*

HOWARD A. NELSON, B.A. M.D.
GREENWOOD, MISSISSIPPI

MAN, IN HIS time, has been studied from many viewpoints. As an organism, he has been torn apart both anatomically and physiologically and medical science of today has been extended largely because of a desire to understand all the parts and activities of the human body both in sickness and health. To cure the human body it is necessary to have a knowledge of the whole of things, is an oft-quoted aphorism of Hippocrates. But to gain the knowledge of the whole of things today with all our modern social complexities is not the same as it was 2400 years ago.

The powerful influence of unhappy emotions on the mind and body was overlooked for a long time even by physicians. Only recently is psychomatic medicine being given its proper emphasis. It is with this purpose that I plan to explore the realm of the so-called affected disorders, especially those conditions wherein the mental conflicts are predominated by physical complaints.

Psychosomatic disease has been defined as a condition in which the chief complaint is usually physical, the subjective symptoms being out of all proportion to the physical findings. There is almost always an underlying and often obscure mental or psychic disorder based on a constitutional inadequacy and on some environmental or circumstantial conflict. This is in contra-distinction to organic disease, wherein the symptoms are clear-cut and are apt to be minimized by the patient. In the affective disorders the complaints seem to spread out like the ripple of waves on a pool of water into which a stone has been thrown, where, though the primary disturbance is really slight, the turmoil of the water is great. Nevertheless, these somatic manifestations are due to some mild organic or real functional disorder. These are not imaginary. True, the patient's threshold to pain and discomfort is lowered or he compensates poorly for this.

For the physician or surgeon to avoid this type of patient, the so-called neurotic, the one whose pathology lies in the distortion of his art of living because his symptoms are all in his mind, might as well discard the cases of gastro-intestinal diseases because he does not like the odor of feces. The mind and body cannot be separated; they go together to make the individual as such and as a personality.

No doubt in a large percentage of psychomatic cases the etiology of the patient's disease lies in his or her distorted personality, whether that distortion be due to fear, sense of inadequacy, disappointments, maladjustments or any of the myriads of intangible stimuli which tend to warp the lives of our patients by making them take refuge in the sanctum of physical ailments. It is they who fall prey to the quacks and swell the coffers of the ill advised surgeons. It is the envisioning of these causes that we, as physicians, transcribe the science of medicine into a true art.

There is reason for almost everything. Admissibly, though embarrassing at times, the human mind is unable to fathom the depths of the reason of all things. We must realize that a patient who presents himself for advice or relief of his illness is not merely a mass of protoplasm coördinated and controlled by a central nervous system, but that he comes as a person with family ties, a job, or maybe a sense of inadequacy because he has no job, and a full set of other human interests and responsibilities. Neither he nor the doctor may suspect how the pattern of his life affects his illness, whether this illness be chronic fatigue, vague gastro-intestinal symptoms, nervous or mental breakdowns, asthma, high blood pressure or innumerable others. It may be due primarily to emotional or spiritual maladjustments, his inability to feel secure, to love, to have faith and above all to find his place in the world's scheme. The sick person's mental reaction to his illness is almost as important to his chances of recovery as the illness itself.

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*Read before the thirty-eighth semi-annual meeting of the Delta Medical Society, Greenville, Miss., Oct. 8, 1941.

If the patient is given a real chance to tell what is the matter to the physician who has established a friendly relation with him, the results are sometimes a flood of light on the problem of diagnosis and treatment. It is here that the value of the interrelationship of the patient, his disease, his personality and his doctor must be understood and through a proper interpretation and emphasis of each as of the other that a satisfactory solution is attained.

It is misleading to tell the patient that there is nothing wrong with him. He does not want to be told this fact or fallacy, else he would never have consulted you. I am not denying the importance of the science of medicine, for without a fundamental knowledge of the many branches of medical science you would not be a safe physician. However, the physician must know how to apply his scientific knowledge if it is to be an asset to him. It is at this point that he reaches the portals of the art of medicine. The physician's knowledge of human nature must be profound. He must recognize the intellectual critical individual, the emotional erratic type, the stolid reluctant personality, the mentally inadequate as well as the ignorant. These are but a sampling of the human problems that constantly confront the physician, who must be prepared to meet these innumerable problems with correspondingly innumerable variations in methods.

Far be it from me to belittle our specific measures for specific diseases. I bow in reverence to our forebears for their march of progress in alleviating the scourges from the earth. But we, as physicians, must search further into the realm of the emotional and psychic traumata. For example in the institution of marriage an individual weds and the formation of the partnership begets not only offspring but also symptoms of unknown potentialities, social injustices and inequalities, the so-called misfits, fear, lack of faith, physical ugliness and a multitude of others, for these are just as much the etiology of our affected disorders as is the malarial parasite the cause of malarial fever.

There is no reason why the assets of the various methods of medical appraisal and practice cannot be practically combined so that the science and art of medicine can walk side by side. There is little doubt that in the routine practice of medicine more triumphs result from the well blended science and art of medicine than from science alone.

Maxim Gorky once wrote "There are some people who look upon disease of the body or soul as the best and most precious thing in life. They nurse it all their lives and only in it do they live at all. Though they suffer by it yet do they live upon it. They complain of it to other people, and by means of it attract themselves to the attention of their neighbors. They use it as a means of obtaining sympathy, and without it they are nothing at all. Take away from them this disease, cure them, and they will be unhappy because they will be deprived of their only means of living."

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Manuscripts and material for publication under the Mississippi State Medical Association should be received not later than the twentieth of the month preceding publication. Address material to Lawrence W. Long, M.D., Suite 412 Standard Life Building, Jackson, Mississippi.

The Second American Congress on Obstetrics and Gynecology will be held in St. Louis, Missouri, April 6 to 10, 1942. All of the meetings and both the commercial and educational and scientific exhibits will be held in the Public Auditorium. Medical section and general congress headquarters will be in the Jefferson Hotel.

Every doctor needs organized medicine and organized medicine needs every doctor. Though our numbers are less our enrollment in the state association should be more this year than ever before. The county, state and national organizations touch every interest in medicine, scientific, economical, social, and medical ethics. Medical problems are multiplied and we can solve them better with organized effort. Medical fellowship is needed as never before and these organizations should activate this. It is a good investment to belong to your state association. It is well worth your while to attend its meetings. Some counties have a hundred per cent membership, all should have. Every county should make the effort. If every man does not pay his dues, try paying them for awhile and see what it will do. On to Jackson with the biggest enrollment we have ever had should be our motto.

The medical profession has never had placed upon its shoulders greater responsibilities, with greater opportunities for service. The profession in the United States must furnish an adequate number of physicians to care well for the soldiers in action and in camp. But at the same time the people at home who are making every effort to keep our boys flying, sailing and marching must not be neglected. The profession in this country does not have as many men as could be well utilized. Mississippi is far short of the number needed. In the United States we have about one doctor to every eight hundred people, in Mississippi this number is more than doubled per doctor. It is not time for any doctor to cut his hours short or shirk or neglect his duty. The civil battle lines are quite as important as those under shot and shell though perhaps not so hazardous. Shorter hours and longer pay as is the order in some organizations, can not be evidenced in our ranks. We must do our full duty and do it well to the full limit of our ability. Every practitioner now has the opportunity to demonstrate his real love for humanity and for his country. Medicine should be kept democratic while democracy for all is being saved. The medical profession as a unit to the last man should consecrate every ounce of its medical energy to the building of total health assets for the nation, do it for the love of service and do it to help preserve the American way of life for ourselves and Christian democracy for all the peoples of the earth. We believe the profession will do its full duty. It will put service above self.

The Wallace Sanitarium is glad to announce that Dr. J. E. Stanfill has returned to the institution as medical director. Doctor Stanfill served on the staff of the hospital for several years during the lifetime of the late Dr. Walter R. Wallace and is experienced in the treatment of both psychiatric and general medical cases. He is thoroughly capable of maintaining the high standards set by Doctor Wallace in the treatment of mental and nervous diseases, and drug and alcoholic addictions.

Mississippi has the lowest number of beds per capita of any state in the union. But even so, nearly half the beds in the general hospitals have stood empty. There must be a pretty definite relation between the income of the people and the hospital beds occupied. Anything that can be done to make these idle beds function for the total health assets of the state is well worth while. We could and should have a hospital system that would be on an equal footing and fair to every person in the state. We could and should have a coördinated and correlated hospital system. The State Board of Health does not crave more responsibilities, but it has been true to the trusts committed to it thus far, and might be trusted further. Our state-owned charity hospitals should be removed as far as possible from politics. Let us put selfishness out of the way and think in terms of better medical service to all people when we think of a hospital system.

We recently spent a few hours in Grenada. We were delighted to find there a splendid hospital of seventy-five beds, well-ordered in every way. Comfortable provision is made for the colored patients. A nice Jersey herd on the hospital grounds indicates that the hospital is well supplied with milk. Up in town we noted the Grenada Clinic, in which we were told every doctor in the town has his office. The town has a population of six thousand. Harmony and cordialty are in evidence in this clinic, a fine index to coöperative medicine. Under this plan more and better medicine can be given with less effort. Grenada has set an example that should be emulated in many towns and counties of the state. In a small town every doctor, every dentist, and the public health department can be housed in one building to the advantage of the profession as well as the people.

As every one must know, practically the entire world is at war. The few small countries that have not entered the arena are being ground into powder between the upper and nether millstones of militarism. To all who have followed history and studied human nature, it has long been apparent that a world-wide conflagration was kindling. The Latin blood that courses through French veins caused this people to stage a revolution against the tyranny of wealth and the corrupt system of government fostered by the lords of capitalism. The whole world was startled by the excesses that grew out of that revolution. Some relief resulted from the tyranny referred to above. But the snake was not dead; its head was bruised but its tail still moved. Perhaps the reptile was hydra-headed and other heads must needs be crushed. Came World War I. The man power of the largest division of the world's surface (and the richest in natural resources) was thrown into the conflict. Little was known by the outside world of the Russian people. Generations of men had been held in slavery of the most unbearable kind. But enforced labor and deprivation coupled with rigorous climate had not destroyed the divine spark in the souls of these men and women. Tradition was kept alive. Since once they had been free, they longed for change and the return of freedom. Tolstoi, though a very rich man and a member of the royalty, began to teach and write concerning the inherent rights of all men. Only a propitious moment and a capable leader was needed for the great bear to stand and "walk like a man." Kipling had foreseen the coming of this event and had, in immortal song, warned the overlords of England to beware of this "bear that walks (would walk) like a man." Suddenly the bear arose. Rivers of blood began to flow. It is true it was fratricidal conflict, but the man and the moment had met. Indescribable horrors were perpetrated but change had come and time moved on. The whole world feared, yea stood in mortal dread of the Russian bear that had dared to stand and walk as a man. How is it today? Upon what food has this great and monstrous beast fed that has converted him into a welcome ally? Only a very few years ago our own Administration was berated and abused for recognizing this monster as a member of the brotherhood of governments. Then came danger, great danger. The Administration proposed to include this people in its lease-lend program. What a storm of criticism followed. How is it now? What a change in sentiment now. The horse seems to have changed color overnight. Again, the "heathen Chinee" is our brother now. But he too fights the monetary system before which civilized nations, so long, have bowed down. What will be the end, what will "the harvest be"? We can neither foresee nor foretell. But two things we know: "Man's inhumanity to man has made countless millions mourn," and "what a man (nation) sows that also shall he (it) reap." If we have sowed to the wind we shall of necessity reap the whirlwind. It is now inevitable that rivers of blood will be shed, millions of lives will be ruined, and numberless hearts will be broken. We must win this war. To lose it is unthinkable. To win it will cost us very many lives that are precious to us all, and in my thinking, will take *all* our wealth. But if we can give these precious lives, why should we withhold our wealth? We have drafted men, shall we not also draft wealth? Perhaps it might be well if *all* the wealth of *all* the world should be consumed. Even so every man would then be on the same footing that the first man found himself standing upon. When he was expelled from the garden he was told that "from the sweat of his brow should man (all men) eat bread." In this distorted time some have eaten bread in return for both sweat and blood, while others have wrested it from those who have labored and bled and died.

I covet no man's wealth, however he may have acquired it. But I think that the cost of this terrible war should be borne by those who possess the wealth and he who has no wealth should be loathe to give his life in the hope that all may yet be free. If indeed this should prove to be the last war (the Armageddon of prophecy), may we not hope that soon the Righteous One will appear and claim the kingdoms of the world as his own? THINK.

You will note in this issue the list of our commercial exhibitors for Mississippi State Medical Association which meets at Jackson in May. We appreciate our exhibitors. We are sure they have the same high ideals and the same aims of service as does our profession. Keep them in mind and be courteous to them when you attend the meeting.

INVITATION

Dear Doctor Anderson:

We wish to invite the members of the Mississippi State Medical Association, especially those living near Memphis, to be present at the 109th annual meeting of the Tennessee State Medical Association. The date is April 14, 15, 16, and the Peabody Hotel is the headquarters.

We will be glad to have your members attend just as many sessions as possible. We believe a good program will be offered and we will do our best to make doctors from our neighboring states feel at home at the Tennessee meeting.

I might add that there is no registration fee and that membership in a sister state association will entitle all visitors to admission to all sessions of the meeting.

Yours very truly,

W. M. HARDY, Asst. Secretary-Editor

Thank you, Dr. Hardy, for your cordial invitation from the good old state of Tennessee whose atmosphere with the spirit of Andrew Jackson and Bob Taylor and your outstanding leaders in medicine is a great inspiration. Speaking for ourselves, we expect to be with you. —Editor.

The Mid-South Postgraduate Medical Assembly had more than a thousand to register at its last meeting. We have a number of the papers ready to be published, a larger percentage than any year previously. If you have not renewed your subscription to *The Mississippi Doctor*, do it now. We believe *The Mississippi Doctor* covers the field of medicine as no other medical journal in the country.

We look forward to the able leadership of Dr. Lutterloh, president of the Mid-South, and the activity of the president-elect, Dr. J. C. Pennington of Nashville. An account of the life of the president-elect follows in the April issue.

News and Comments

We acknowledge our indebtedness to Dr. L. L. Minor for the "fillers" used in space at the end of essays in this journal. Dr. Minor also covered the Mid-South meeting in these columns.

The Mid-South Postgraduate Medical Assembly's fifty-seventh session was a successful one. Dr. C. M. Speck of Whitfield, president, presided. Dr. C. G. Lutterloh of Hot Springs assumes the presidency, and Dr. Jeff Pennington of Nashville is president-elect.

This live association in its origin was known as the Tri-State Medical Association, the members being from the three states centering around Memphis. The officers are still confined to this area but the membership is mid-Southern and the essayists are nationally known specialists in their respective lines.

Dr. Speck in his address said: "We are today engaged in a death struggle to determine whether such independent organizations as this medical assembly and such governments as ours shall longer survive." He characterized three fields of medicine as having made the greatest advances during the assembly's history: the laboratory, preventive medicine and public health, and mental hygiene and psychiatry. "The last war and this war have thrown the intensive spotlight upon the importance of psychiatry, the treatment and prevention of mental ills, more than a century on inhuman, criminal bungling of antiquated custodial asylums have done."

Dr. Frank N. Wilson of Ann Arbor, Michigan, professor of medicine in the university there, spoke interestingly of angina pectoris. It was a safe and sane address, avoiding excessive readjustments of the patient's normal form of living. Of course, he ordered to avoid over-exertion, excitement or excess weight. Dr. Wilson said: "Sudden death should not be the natural association with angina pectoris. Some sufferres recover entirely and a vast majority will not be completely incapacitated."

Dr. David C. Wilson, professor of neurology and psychiatry at the University of Virginia, Charlottesville, spoke on "Practical Methods of Diagnosis in Nervous and Mental Diseases." "From the early diagnosis of mental diseases, we have to realize that besides the integration paralleling development of the nervous system, we also have a growth of the personality from childhood to adulthood, so when there is a retreat there will be a return through the ages of life as well as the levels of the central nervous system, and the defense mechanisms used by the personality in an effort to keep itself intact will correspond to the age as well as the state of integration. Dr. Wilson pointed out that as the nervous system declines, ethical values are lost first, then intellect. With the loss of instinct as well, the individual can depend only on his reflexes.

Often in early stages of decline the victim shows considerable intelligence, and at times is successful in large enterprises.

As his ethical sense crumbles he becomes more hardboiled, selfish, domineering and lacking in consideration of others. The next step is a corresponding break-up of his intellect and a disablement of his character.

Dr. Leroy A. Schall, professor from the Harvard Medical School, Boston, delivered a paper on diagnosis and treatment of cavernous sinus thrombosis. He suggested the use of heparin to prevent death from infection of the cavernous sinus, where heretofore such an infection made death certain; he stated that this drug is a strong organic acid first isolated from the liver and proved to be a normal part of the blood plasma.

Dr. Stanley Gibson of Northwestern Medical School, Chicago, read a paper on "The Diagnosis of Chest Conditions in Childhood." He stressed that obstructions in the bronchial tubes, either by foreign matter or mucus secretions, must be attended to at once or serious inflammations may result, with collapsing portions of the lung or incurable chronic conditions.

He also warned mothers not to force their babies and small children to take oils, nose drops or the like that cause the child to sputter and cough or choke in trying to resist. There is danger of the remedial agent getting into the bronchial tubes and bringing on trouble later.

"Practical Aspects of the Common Contagious Diseases" is the paper by Dr. Phillip M. Stimson, Cornell Medical University Medical College of New York. The importance of mumps from the public health and military standpoint was emphasized. "Throughout the United States Army in the World War, one out of every twenty white, and one of every six negro men had an attack of mumps. In four camps in the South, more than 20 per cent of the soldiers had mumps. The Army lost 3,884,147 hospital days because of mumps, a number exceded only slightly by that of days lost to gonorrhea, and equivalent to a division of 27,000 men being out of service nearly five months." To combat infantile paralysis Dr. Stimson, said: "Do not swim in contaminated water; avoid anything that might injure the intact mucus membranes of the nose and throat and particularly avoid tonsil and adenoid operations. Avoid chilling or physical exhaustion. Treat any illness, no matter how slight, as potential infantile paralysis and insist in prolonged rest in bed."

"Headaches and Head Pains of Ocular Origin" by Dr. A. D. Reudemann of Cleveland, Ohio, is an interesting thesis on a very troublesome and annoying condition. There is no more disconcerting and discomposing pain than headache. We hope our learned scientists will continue to pursue their studies along the lines of finding more and better remedies for headache and the like.

Two mild cases of smallpox developed in a Memphis hospital recently; several thousands were vaccinated as a routine precaution. The situation has entirely cleared up.

Trinitrophenylmethylnitramine, commonly called tetryl, is an explosive and is used as a booster charge in bombs.

Memphis is to be the location of another U. S. basic hospital, construction is under way.

The Mississippi Doctor is the official journal of this assembly, so you will have the opportunity of reading many of these papers later.

The commercial exhibits were good, the entire meeting was a successful one. Those who arranged the program did a good job.

The most familiar and most troublesome condition in the pregnant state is vomiting. The remedial agents used are legion and to enumerate them would take all of the space allotted me. Nausea and vomiting, especially in the morning and following suppression of the menses, are signs to which the women themselves, and the laity in general, attach great value. It is one of the first of the presumptive signs of pregnancy. The vomiting is caused by the growing and expansion of the uterus, thus stretching and dilating the structures of that organ, which causes a reflex irritation of the sympathetic nervous system upon that center of sympathetics, the stomach.

There are few known therapeutic agents which have not at one time or another been essayed as remedies for hyperemesis gravidarum. Some of them enjoy for a time high repute as specifics, but the sobering effects of experience have invariably served to dispel illusive hopes, the most successful of them proving uncertain and of benefit to only a limited class of patients.

The moral effect produced on a patient has marked influence on the effect of remedial agents. A positive statement that a certain remedy would unfailingly check the vomiting has made it immediately successful. The physician who overlooks the power of mental suggestion is lagging behind in his profession. It is conceded by scientists that imagination has much power as a curative agent. Lovely woman is considered to have more than her share of imagination! Why cannot we take advantage of this in relieving her of her ills?

SCIENTIFIC EXHIBITS

This year the Mississippi State Medical Association has a special Committee on Exhibits. The meeting will be held at the Robert E. Lee Hotel, Jackson, May 12, 13, 14.

A feature will be the scientific exhibits for which the mezzanine floor of the hotel has been reserved. Every member of the Association is invited to present exhibits of the work that he is doing. These may include methods of treatment, results of treatment, technic, records and specialties—in fact, anything that you are doing well or that may show others how to do better.

It is especially desired to have a "Hobby Show" in which the "everyday" doctors of Mississippi may display and explain a pet instrument or apparatus or method that they have worked out—something that works well for them and may help the other man too.

There will be ample space for all and the committee will aid in every way in setting up the displays, but it will help much if the committee can know early—now, if possible, just what will be shown and the space required.

It is planned to get out a printed or mimeographed description of scientific exhibits so that everyone in attendance at the meeting may see them all.

Will YOU not plan now to have an exhibit and so inform the committee so that proper space may be reserved and descriptive listing be made?

Please address correspondence in regard to scientific exhibits to Leon S. Lippincott, M.D., P.O. Drawer 231, Vicksburg, Mississippi.

Reserved Spaces

Squibb and Sons—New York. No. 1.
E. L. Mercere—Memphis. No. 2.
.... No. 3.
H. G. Fisher and Co.—Chicago. No. 4.
Mead Johnson and Co.—Evansville. No. 5.
Endo-Products Co.—New York. No. 6.
C. B. Fleet and Co.—Lynchburg. No. 7.
American Surgical Supply Co.—Jackson. No. 8.
The Borden Company—New York. No. 9.
Van Peet and Brown—Richmond. No. 10.
E. J. Hart and Co.—New Orleans. No. 11.
Southern Surgical Supply Co.—New Orleans. No. 12.
John Wyeth and Bro.—Philadelphia. No. 13.
A. S. Aloe and Co.—St. Louis. No. 14.
Lederle Laboratory—New Orleans. No. 15.
Eli Lilly and Co—Indianapolis. No. 16.
General Electric X-Ray Co.—Memphis. No. 17.
Kay Surgical, Inc.,—Memphis. No. 18.
Harrower Laboratories—Glendale. No. 19.
.... No. 20.
.... No. 21.
Dick X-Ray Company—Memphis. No. 22.
McKesson and Robbins—Birmingham. No. 23.
J. A. Majors Company—New Orleans. No. 24.
American Hospital Supply Corp.—Chicago. No. 25.

IMPORTANT MEDICAL MEETING IN MARCH

The American Urological Association, Southeastern Section, will meet at the Patten Hotel in Chattanooga, March 19, 20, 21.

This meeting is for all members of the medical profession as well as for urologists. One of its chief aims is to promote closer relationship between urology and other branches of medicine, general practice in particular.

In addition to able men in the Southeast, there will be addresses by Dr. Oswald Lowsley of New York, president of the American Urological Association, Dr. Robert Herbst of Chicago, past-president, and Dr. Gordon McKilm, eminent urologist of Cincinnati.

All physicians who are not members will be registered free of charge.

The Chattanooga and Hamilton Medical Society, of which Dr. G. Madison Roberts, Sr., is president, is making great preparations to entertain and give the physicians a warm welcome.

Dr. Hiram Laws, a prominent surgeon in Chattanooga, is president of the Tennessee State Medical Association and officially invites every interested physician to be present so that he may personally extend the greetings of the Tennessee State Medical Association.

DR. HENDERSON HEADS SOUTHEASTERN SURGICAL CONGRESS

Dr. E. L. Henderson, 1110 Francis Building, Louisville, Kentucky, was made president-elect of the Southeastern Surgical Congress at the closing session of its thirteenth annual meeting in Atlanta, March 11.

Dr. Henderson is one of the leading surgeons of Kentucky and will be remembered most pleasantly as general chairman for the Southern Medical Association meeting in Louisville, November, 1940. He is a member of the Council of the Southern Medical Association from Kentucky.

Dr. Henderson's many friends will be glad to know of the honor that has come to him.

INVITATION TO DOCTORS INTERESTED IN FRACTURE SURGERY

The following letter from Dr. Leslie V. Rush, Meridian, to the editor indicates the sincerity of this group of surgeons doing fracture work to have the coöperation of all men in the state interested in fracture treatment:

Dear Dr. Anderson:

As chairman of the Regional Fracture Committee of the American College of Surgeons, I am anxious to get more interest developed in fractures, and at the suggestion of Dr. Scudder I am making another attempt this year to have either a luncheon or dinner at the Mississippi State Medical Meeting, to be followed by a constructive program on fracture surgery.

There is a popular misconception concerning this fracture committee in that most men think it is limited exclusively to those men who are fellows of the College of Surgeons. On the contrary, we would like to bring into the activities of this committee all of the men of the state who are interested in fracture treatment regardless of whether or not they are members of the College of Surgeons. It is extremely difficult to find out just which of the members of the association have manifested interest in fracture treatment.

An earnest effort is being made to contact those men of the state who would like to take part in its activities and all members of the medical profession are most cordially invited to attend. I feel that once it is well established, a great deal of good can be accomplished by helpful programs to the doctors, improving the facilities of the hospitals and in educating the public in those essential elements of first aid and transportation of the injured. Any constructive criticism that you might have will be most gratefully received.

In replying to this letter, if you will be good enough, please mention the names of those men in your part of the country who have maintained an interest in fractures. I have mailed questionnaires over the state during the past year but the responses were almost negligible.

With best wishes to you, I am

Most sincerely yours,

Leslie V. Rush, M.D.

PHYSICIANS NEEDED IN PANAMA CANAL ZONE

The U. S. Civil Service Commission has announced an examination to secure physicians for service in Panama Canal Zone. The entrance salary is $4,000 a year, and free transportation by boat or plane is furnished from port of embarkation, the salary beginning on the date of departure from the United States. Applications will be accepted by the Commission in Washington, D. C., until further notice. There is no written test. Applicants must have been graduated from a Class A medical school with a degree of M.D. subsequent to May 1, 1920, and, in addition, must have had at least one year of experience in a hospital since graduation. Applicants must not have passed their fiftieth birthday; however, because of the arduous duties in the tropical climate, applicants between 25 and 35 years of age are preferred.

Further information may be obtained at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D.C.

The Third District Health Officers' Society met with Dr. L. B. Austin, the president, in Rosedale, Friday, February 27, at 11 a.m. The following doctors were present:

Dr. G. R. Post, Clarksdale, Dr. J. W. Barkley, Belzoni, Dr. Andrew Hedmeg, Indianola, Dr. R. J. Jones, Greenwood, Dr. L. H. Eubanks, Lexington, Dr. J. P. Ward, Greenville.

A short business meeting was held in Dr. Austin's office, after which the meeting recessed and the members attended a delightful luncheon as guests of the Rosedale Rotary Club. Dr. Austin introduced Dr. Ward, who in turn introduced the other visiting health officers. Dr. Hedmeg of Indianola made a short talk on "Health and National Defense," followed by Dr. Stafford of Rolling Fork who talked briefly on "Changes to Be Expected in Health Department Work as a Result of the War."

The possibility of a grant from the National Foundation for infantile paralysis, and ways and means by which x-ray apparatus could be obtained locally for x-raying tuberculosis contacts and suspects were discussed at the business session.

SECOND SERIES OF WAR SESSIONS ANNOUNCED BY AMERICAN COLLEGE OF SURGEONS

Colonel Hugh J. Morgan, U. S. Army Medical Corps, and Capt. Frederick R. Hook, chief of the Surgical Service of the United States Naval Hospital in Washington, will represent the Army and Navy respectively at the second series of war sessions being conducted by the American College of Surgeons for all members of the medical profession and executive personnel of hospitals in the United States.

The second series will be held in the following cities:

New Orleans, La., at the Jung Hotel, March 16

Atlanta, Ga., at the Atlanta Biltmore, March 18

Jacksonville, Fla., at the George Washington Hotel, March 20

Durham, N. C., at the Washington Duke Hotel, March 23

Baltimore, Md., at Lord Baltimore and Belvedere hotels, March 25

Harrisburg, Pa., at the Penn Hotel, March 27

Newark, N. J., at Robert Treat Hotel, March 28.

COMING MEDICAL MEETINGS

American Congress of Obstetrics and Gynecology,—St. Louis, Mo. April 6-10.

American College of Physicians, St. Paul, April 20-24.

Arkansas Medical Society, Hot Springs National Park, April 27-29.

American Medical Association, Atlantic City, June 8-12.

Mississippi State Medical Association—Jackson, Miss. May 12, 13, 14.

FOOD FOR FREEDOM

By Claude R. Wickard, Secretary of Agriculture

"Food is a whole arsenal of weapons in this struggle for human freedom. It is the driving force behind high production by munitions workers, and top-notch performance and strong morale among soldiers and sailors. * * * Our national self-interest and our humanitarian instincts challenge us to do this job of producing food and do it on a scale that will write history. * * * In the day of victory when the nations sit down at the peace table our food stock piles, ready to be drawn on by the famished people of the Old World, will give great force to our views. For they will show once and for all that democracy builds for the needs of common men. * * *By winning our American battle of farm production we will help to make it possible once again for men in all parts of the earth to live in comfort and in tolerance and in freedom."

These words of our efficient member of the President's Cabinet are apropos. We are now in war and our fortunes and our faith are inseparably bound up with its outcome. We are now faced with stern realities which do not admit of debate.

Very few of us will have the opportunity of heroic self-devotion, but every day brings the petty wearing sacrifice which is counted full weight in God's scales.

WORK

Sir William Osler eloquently wrote, "It is the open sesame to every portal, the great equalizer in the world, the true philosopher's stone which transmutes all the base metal of humanity into gold. It is directly responsible for all the advances in medicine during the past twenty-five centuries. Laying hold upon it Hippocrates made observation that became the warp and woof of our art. . . . With its inspiration Harvey gave an impulse to a larger circulation than he wot of, an impulse which we feel today . . . With it Virchow smote the rock and the waters of progress gushed out; while in the hands of Pasteur it proved a very talisman to open to us a new heaven in medicine and a new earth in surgery. And, the master-word is WORK, a little one, as I have said, but fraught with momentous sequences if you can but write it on the tablets of your hearts, and bind it upon your foreheads."

ANY PHYSICIAN MAY EXHIBIT "WHEN BOBBY GOES TO SCHOOL" TO THE PUBLIC

Under the rules laid down by the American Academy of Pediatrics, their new educational-to-the-public film "When Bobby Goes to School" may be exhibited to the public by any licensed physician in the United States.

"When Bobby Goes to School,, is a 16-mm. sound film, free from advertising, dealing with the health appraisal of the school child, and may be borrowed by physicians without charge or obligation on application to the distributor, Mead Johnson & Company, Evansville, Indiana.

CHICAGO SELECTED FOR 1942 CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

Because of the war, the thirty-second annual Clinical Congress of the American College of Surgeons will be held in Chicago October 19 to 23, instead of in Los Angeles as originally planned. Headquarters will be at the Stevens Hotel. The twenty-fifth annual Hospital Standardization Conference sponsored by the College will be held simultaneously. The program of both meetings will be based chiefly on wartime activities as they affect surgeons and hospital personnel in military and civilian service.

AMERICAN CONGRESS ON OBSTETRICS AND GYNECOLOGY

St. Louis, Missouri, April 6-10, 1942

The general features of the program for the coming Congress may be announced as follows:

The morning sessions will be divided into two periods from 9:30 to 11 and 11 to 12. The more formal presentations will appear in the first period.

Monday morning at 11 o'clock there will be a general "Obstetric Information Please," based on the well known quiz program and presided over by a moderator and four experts. This will be repeated on Wednesday morning, for shock and hemorrhage and Friday, on economics. Clinical conferences on genital infections will be held Tuesday morning at 11 and Thursday morning on "How not to treat Carcinoma." During the afternoons various groups will present formal programs devoted to nursing, public health, and hospital administration, among which will be certain combined programs.

A special feature of this Congress will be a daily consultation service at 3:30. About 50 nationally known physicians will make themselves available for fifteen-minute consultations through a registration system by individual practitioners who may desire such advice in their specific problems.

Round table discussions will also be arranged by the section chairmen.

Practical demonstrations are scheduled in the scientific exhibit area on mannikin deliveries, home care technic, and blood transfusions. Details of programs of other sections will appear shortly.

Further information is available at the Central Office of the Congress at 650 Rush Street, Chicago. Hotel reservations should be made directly and at an early date. Physicians, nurses, public health administrators, educators, and hospital administrators are urged to send in their registration fee of $5.00.

DEFENSE SAVINGS PROGRAM

FOR VICTORY
BUY
UNITED STATES DEFENSE BONDS AND STAMPS

Four major problems confront America in the war crisis that is at hand. They confront the armed services, at the front or getting ready to move there. They confront all citizens here at home.

For one thing, we must become in fact, as well as word, the arsenal of democracy. Then we must find a way to transport the goods to the fighting fronts. Our men in service must do battle in the air, on the sea, and on the land. And finally, we at home must pay the costs of the war effort.

We are paying heavier tax bills than ever before, but tax revenues are not sufficient to meet the annual costs of war. Our government must borrow billions of dollars from the people—not only borrow now, but month after month, until the fight is won. As citizens, as Americans, we physicians must buy Defense Bonds regularly and systematically until victory is ours.

There are three series of Defense Savings Bonds: Series E, F and G. Series E Bonds, "The People's Bonds," can be bought only by individuals. They are appreciation bonds which, if carried through to the ten-year maturity date, provide a return of 33⅓ per cent upon the investment. This is equivalent to an annual return of almost three per cent —2.9 per cent to be exact. The smallest costs $18.75 and pays $25 at maturity. Others cost from $37.50 ($50 maturity value) to $750 ($1000 maturity value). A Series E Bond may be registered in the names of one or two persons or in the name of one person with a second listed as beneficiary. A bond of this series may be purchased at any post office and almost any bank.

Series F Bonds are also appreciation bonds but the F Bonds may be purchased by associations and corporations as well as individuals. Bonds of this series are purchased for 74 per cent of their face value, and at the end of the 12-year maturity period provide a return equivalent to an annual interest rate of 2.53 per cent, compounded semi-annually. The smallest F Bond costs $18.50 and pays $25 at maturity; the largest costs $7,400 and pays $10,000.

Unlike the E and F Bonds, Series G Bonds are issued at par, that is, the cost is the same as the face value. These are 12-year bonds which pay interest semi-annually at the rate of 2½ per cent. Only Federal Reserve Banks and the Treasury Department issue the F and G Bonds, but most commercial banks will handle applications for them.

Many of the men in our profession are in service on the front lines. Others of us are assisting the armed and civilian forces at home. But all of us *must* and *will* put our dollars into the front line battle of America's fight for freedom.

—Defense Savings Staff—H.S.

LOOKING FORWARD

A man is old, I guess its true,
When his thoughts turn back to the days of youth.

Recently it was my privilege and pleasure to attend a regular monthly meeting and banquet of the Central Medical Society at the Robert E. Lee Hotel in Jackson, Mississippi.

In being seated at the dining table I happened to sit down near the end of the table. Just on my left was Dr. Garrison, at the end of the table was Dr. Shands, while directly across the table from me was Dr. Rembert. All of us being near the same age we naturally felt a kindred spirit of good fellowship, and we fell to discussing our young days as doctors. We had all ridden horseback astride the old-fashioned "pill pockets" or saddle bags, and could all appreciate the good old horse and buggy days.

We just got to wondering what the young doctor of today would do were he to be called about ten miles in the back country with only the information given him by the messenger, that the lady was having some kind of "spells." His only means of transportation was travelling horseback over a road sheeted with ice, and when he got in sight of a log cabin, the population of the countryside was frantically waving for the doctor to hurry please, as the lady was dying. When he arrived at the bedside he found the wife in the seventh month of pregnancy with lower extremities badly swollen and a well-defined case of eclampsia, knowing no help was near or hospitals available. We should like to peep in on the scene and see just how he would do. Of course this picture is an old one to us old gray heads, who have lost surprisingly few cases, depending alone on drastic cathartics and free purgation.

Of course, the young doctor of today might tell us a lot about vitamins, electrocardiograph, and the polarity of an x-ray tube, but we old gray heads can at least tell them which end of a horse the bridle goes on and the proper place to fit the crupper on the buggy harness.

But the sad side of the story is: After we have attained our seniority, and a fund for knowledge ripened and seasoned by years of experience, to have our government tell us that we are too old and not wanted in our defense army. We would be proud of a military rank befitting our station in life and do our part in hospital service. Knowing the best of every man's life comes past the age of fifty has prompted me to write this poem:

GRAY HAIRS

The great achievements in days gone by,
In the drama of Life today
Are not by the boy with golden curls,
But by men whose heads are gray.

The man who commands the army throngs
In peace or battle array,
Is not the private, corporal or guard,
But the general whose head is gray.

Our ponderous trains on tracks of steel,
That run on a schedule time,
Their hum of speed is music shed
On the gleaming rails behind.

And as we speed serenely on
Through the darkest night or day,
We know the man at the throttle ahead,
Is a man whose head is gray.

When pestilence o'er our own fair land
And the specter death hold sway,
The men who conquer foul disease
Are men whose heads are gray.

But honor to our younger men,
Whose fame will bloom some day,
Not while they wear those raven hairs,
But when those hairs turn gray.

—By R. B. Baugh, M.D.

PROCUREMENT AND ASSIGNMENT SERVICE FOR PHYSICIANS, DENTISTS AND VETERINARIANS

Provision of Medical Officers for Military Services

At the time of the Pearl Harbor incident, Dec. 7, 1941, the Army was short approximately fifteen hundred physicians to bring all existing installations up to the war strength. Requisition was made on the Procurement and Assignment Service immedately to secure such physicians under the age of 36. The number of physicians in the service was adequate to meet all professional demands in the care of patients but was not sufficient to provide physicians for all organizations on a war strength basis. Therefore the Procurement and Assignment Service on December 18 authorized the publication of application blanks for enrollment with a view to meeting the immediate needs of the Army. These blanks have been circulated by *The Journal of the American Medical Association* and by many state organizations. Some confusion has arisen in that many physicians interpreted the enrollment blank as another call for every physician in the United States to register. Actually, only those ready to volunteer for immediate service were wanted and only the applications of those capable of meeting specified qualifications are being forwarded.

The continued registration of all men under 36 who are immediately available for military duty in the Army and the Navy will suffice to meet the immediate needs of the military service, at least until completion of the roster system now being established in the office of the Procurement and Assignment Service.

Within sixty days the Procurement and Assignment Service expects to publish the physical requirements for service with every military, governmental, industrial and civil agency utilizing the services of physicians, dentists and veterinarians. Each physician, dentist or veterinarian will be asked to make a self analysis of his physical condition, so that he may himself determine with which of the agencies he is physically qualified to serve. Shortly thereafter the Procurement and Assignment Service expects to mail a new questionnaire and enrollment form. Each professionally qualified person will be asked to state, first, that he will volunteer his service in the interest of the national emergency; second, to state his first, second, third and fourth choice of the agencies which he will be willing to serve for the duration of the war. A list will be furnished of every military, governmental, industrial and civil agency requiring the services of physicians, dentists or veterinarians.

On self analysis of his physical condition, each man will be thus able to determine whether his physical fitness qualifies him for duty with the requisitioning agencies. On receipt of the enrollment form the Procurement and Assignment Service will issue a certificate of enrollment and a numbered button which will certify that the recipient has offered his services in the interests of the national defense. Thus, those who remain at home in an essential capacity will derive the satisfaction of knowing that they have offered their utmost to the national emergency and that this offer has been formally recognized by the Procurement and Assignment Service.

Sam F. Seeley, Executive Officer
Morris Fishbein, Chairman Committee on Information Procurement and Assignment Service.

The Borden Company has made an award of $1,000 to assist the oustanding work done by Irvington House, of Irvington-on-Hudson, N. Y., in the study and treatment of rheumatic fever.

The researches, under the direction of Dr. Ann G. Kuttner, with the guidance of a medical advisory board, have made Irvington House outstanding in this field. Known as "The House of Mending Hearts," it houses about one hundred young, underprivileged patients. It works on rheumatic heart disease, and its high standard for the care of patients has brought Irvington House great distinction as an experimental heart-saving sanatorium and training center.

County Societies

PRESIDENT OF THE NORTHEAST MISSISSIPPI THIRTEEN COUNTIES MEDICAL SOCIETY 1942

Born at Kossuth, Mississippi, Dr. Hill received the degree Doctor of Medicine at the University of Tennessee, College of Medicine, in 1931. After completing internship at the Kansas City General Hospital he served an assistantship to Dr. Guy A. Caldwell then at Shreveport, La., in orthopedic surgery. During this time he was also on the visiting staff of the Shreveport Charity Hospital. Since the latter part of 1933 he has been practicing general surgery at Corinth and was president of the Kiwanis Club in 1937. He is the immediate past president of the Alcorn County Medical Club.

Dr. Stanley Hill from the beginning has been active in medical organization and he is a leader in medical thought. He keeps well informed in medicine and, in addition, is a progressive citizen taking time out to do his part in civic affairs. He is making an able, progressive, and aggressive president of the Northeast Mississippi Thirteen Counties Medical Society.

The Northeast Mississippi Thirteen Counties Society held a very good meeting at Booneville on Tuesday, March 10. President Gus Street was present and delivered a fine address. Dr. F. G. Riley, of Meridian, was the guest essayist. Mrs. W. K. Stowers, of Natchez, president of the Woman's Auxiliary, and Mrs. V. B. Philpot, president-elect, added their presence and inspiration to the meeting.

Deaths

Dr. John T. Blanks, 81-year-old practicing physician, died at his home at Dermott, Ark., February 18, after an illness of two weeks. Dr. Blanks was born at Elon, Ashley County, May 13, 1861. He received his M.D. from Tulane University Medical School, New Orleans, in 1887, and began practice at Berea, the same year. Dr. Blanks moved to Dermott in 1908. He did postgraduate work at Tulane University. He was a member of the Dermott Methodist Church and a member of the American Medical Association. He is survived by one daughter, Miss Helen Blanks, of Dermott, and two brothers, J. P. Blanks, of Hamburg and Bruce Blanks, of Jones, La.

Dr. David A. Morgan, retired brain specialist and psychiatrist, died at the Baptist Hospital, Memphis, Tenn., February 23, after an illness of about one week following a stroke. Dr. Morgan was 56. He had been living in Memphis about three years. He was a native of Dawson, Ill. Dr. Morgan graduated from Washington University, St. Louis, and also studied at Columbia in New York. He was a member of the 89th Division Ambulance Corps in France during the World War I. After the war he was assigned as a psychiatrist and brain specialist to the Veterans Hospital at Excelsior Springs, Mo., retiring about seven years ago. He is survived by his wife, one brother and one sister.

Dr. H. B. Wilson, prominent Warren County physician, died at his home near Vicksburg on January 10, 1942, after a short illness. Dr. Wilson had practiced medicine about sixty years and was one of the best known physicians in that section. He was a native of Jackson, moving to Vicksburg to enter the drug business when a young man. Later he studied medicine at the Bellevue Medical School in New York After his graduation he returned to Vicksburg and served his internship in the Charity Hospital. He was a member of the Issaquena-Sharkey-Warren Medical Association. He is survived by his wife, Mrs. Lettie M. Wilson.

Dr. G. F. Crawford died at his home in Tyro, Miss., February 5, 1942. Dr. Crawford was born at Salem, Miss., July 18, 1868. He received his medical education at Louisville, Kentucky, graduating in 1892. He was licensed to practice in Mississippi on April 9, 1891. He had practiced in Chulahoma in Marshall County before going to Tyro.

The American Optical Company announces the death of Harry Willard Loch, a well-known and highly respected figure in the Philadelphia optical world. Mr. Loch has been employed by the American Optical in Philadelphia since 1923. Previous to that time he was associated for many years with the D. V. Brown Optical Company of Philadelphia, which was merged with American Optical in 1923. He is survived by his widow, a niece, two brothers and two sisters.

Dr. Roland W. Hall of Clinton, who died at his home on February 14, 1942. Dr. Hall was born at Harrisville, Mississippi, June 30, 1872, graduated from the University of Nashville in 1901, licensed to practice medicine in Mississippi in 1899. He was president of the Central Medical Society in 1922, served as director of the Bureau of Vital Statistics, Jackson, from 1916 to 1924. He leaves his wife, one son, Dr. Roland W. Hall, Jr., and two daughters, Mrs. Brister Sumrall, Tylertown, and Kathryn, a senior at Louisville State University.

For more than thirty years Dr. Hall fathered as well as doctored the students of Mississippi College. He loved them as he did the college of which he was a graduate. His heart and soul was in the pre-med class at the college. He has a deep love for his church and was devoted to his family. Choosing dermatology as his specialty, he saw the need for development in this field and put himself doggedly to it. Dr. Hall was a diplomat, a fine business man and a friend who was kind, true and considerate. The influence of his Christian life will live in the hearts of the boys of Mississippi College and be transmitted as long as the human river of life flows into the ocean of eternity. His kindness and his friendship we shall not forget.

Dr. W. J. O. Lee, 65, died at his home in Humboldt, Tenn., March 12, following a heart attack. He was born and reared in Hardeman County, near Bolivar, Tenn. He attended Lane College at Jackson and later completed his medical training at Meharrey College in Nashville. He had been practicing in Humboldt for more than 30 years. He was a member of the Lane's Chapel Methodist Church and its board of stewards. He is survived by his wife, Mrs. Ella V. Lee, and two brothers, the Rev. George F. Lee of Elmo, Texas, and the Rev. John W. Lee of Hattiesburg, Miss.

Dr. Joseph Allen, of Goodman, Miss., died at a Jackson hospital, February 17, following a lingering illness. Dr. Allen was 71. He received his education at the University of Tennessee Medical School, graduating in 1896, and did postgraduate work at Marion Sims Hospital in St. Louis. He had been a resident of Goodman since 1935. He is survived by his wife, Mrs. Mary Simpson Allen; three sons, John, Dorsey, and Paul Allen; one sister and two brothers.

Book Reviews

DISEASES OF WOMEN, by Harry Sturgeon Crossen, M.D., F.A.C.S., Professor Emeritus of Clinical Gynecology, Washington University School of Medicine; Gynecologist to the Barnes Hospital, St. Louis Maternity Hospital, and St. Luke's Hospital; Fellow of the American Gynecological Society and the Central Association of Obstetricians and Gynecologists; and Robert James Crossen, A.B., M.D., Assistant Professor of Clinical Gynecology and Obstetrics, Washington University School of Medicine; Assistant Gynecologist and Obstetrician to the Barnes Hospital and the St. Louis Maternity Hospital; Fellow of the Central Association of Obstetricians and Gynecologists; Diplomate of American Board of Obstetrics and Gynecology. Ninth Edition, entirely revised and reset, with eleven hundred twenty-seven engravings, including forty-five in color. The price is $12.50. Published by the C. V. Mosby Company, St. Louis.

It is remarkable the amount of information contained in this book. It covers the subject in a very concise manner, combining most admirably preoperative and postoperative treatment with operative technic. In this edition of *Diseases of Women* the authors have given much attention to the developments of biologic and physiologic investigations which are making history in the field of gynecology. This new knowledge is related to diagnosis and treatment in a manner in which the practitioner can utilize it. A full discussion is given in the book on ovarian and uterine physiology. This book of 948 pages is an epitomized bible on diseases. It is a book that can be utilized by both specialist and practitioner.

Mississippi State Medical Association

Organized 1867 **Next Meeting: May 12, 13, 14, 1942, Jackson**

OFFICERS

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President-Elect—H. Lowry Rush, Meridian
Vice-Presidents—B. B. O'Mara, Biloxi
H. C. Sheffield, Biloxi
T. H. Rayburn, Pontotoc

Secretary—T. M. Dye, Clarksdale
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W. W. Crawford, Hattiesburg

Exhibits:
Dr. D. W. Jones, Jackson
Dr. Leon S. Lippincott, Vicksburg
Dr. W. H. Anderson, Booneville

COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	D. W. Hamrick, Corinth	R. H. DeJarnette, Corinth	Third Friday, 6:30 p.m.
Amite	D. H. Thornhill, Crosby	W. T. Thornhill, Crosby	Second Thursday 7:30 p.m.
Central Medical	R. B. Austin, Forest	James G. Thompson, Jackson	First Tuesday 6:30 p.m. July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. P. Walker, Marks	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	B. Z. Welch, Biloxi	Joseph Kuljis, Biloxi	1st Wed. each month
Delta Medical	J. D. Simmons, Cleveland	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	C. W. Emerson, Hernando	L. L. Minor, Memphis, Rt. 4	First Mon. Jan., Apr., Jul., Oct.
East Mississippi	W. R. Hand, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	W. K. Purks, Vicksburg	Alston Callahan, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian.	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	Stanley A. Hill, Corinth	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	J. M. Smith, Magnolia.	V. S. Holmes, McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	S. E. Fields, Centerville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Eye—Alston Callahan, Vicksburg.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H, Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

EYE

INTERPRETATION OF THE HYPERTENSIVE FUNDUS by Mason Baird and Grady Clay, Atlanta. Southern Medical Journal, February 1942.

The essayists believe that essential hypertension can be divided into two types, benign and malignant, and that these can be distinguished by the fundus picture.

They classify benign into four grades of increasing severity: (1) Slight changes such as a slight loss of translucency and a change in the light reflex at the arteriovenous crossings, and early suggestions of arteriolar spasm. (2) With increasing hypertension, the light reflex widens, there is further loss of translucency, and more arteriolar spasm. The vessels may become slightly tortuous, with beginning arteriovenous constriction at the crossings. (3) Marked localized changes in caliber; well defined copper-wire reflex; marked arteriovenous constriction and definite sheathing of the vessels. A few hemorrhages may occur, but they are usually flame-shaped and not significant. (4) Marked sclerosis, irregularity of lumen, broad reflex, silver-wire arterioles, sheathing, marked arteriovenous compression, hemorrhages, usually shallow flame-shaped, or deep round sharply defined exudates, most often in the macular area, but no edema of the disk.

Malignant hypertension is also classified in four divisions: (1) Hyperemia, some edema of the disk and surrounding retina, superficial hemorrhages, a few areas of cotton-wool exudates and definite constriction of the arterioles. (2) Marked edema of the disk, 3 to 5 diopters, and a spread of swelling to the macular area. The hemorrhages are more numerous and more in the periphery of the fundus; the cotton-wool exudates are more widely distributed, and there is usually a beginning macular star. (3) Hemorrhage throughout the retina, probably a perfect macular star, deep exudates and cotton-wool exudates not quite so numerous, with the punctate variety more in evidence. (4) Recession of the above picture with end-results a secondary optic atrophy; sclerosis and obliteration of vessels, atrophy of the retina and disappearance of exudates.

The benign type does not carry such a poor prognosis, especially in the earlier stages, and it is only because of the renal involvement in the later stages that it does become grave. Malignant hypertension runs a rapid and fulminating course, especially in the young negro.

DISCUSSION: In his paper before the Mid-South Postgraduate Assembly in Memphis recently, on "Vascular Disease of the Retina," Dr. E. C. Ellett referred to this paper. He stated that he preferred a simplification of the terms, rather than a detailed classification that might be confusing. He agreed that the term "retinopathy" is preferable to "retinitis" and also to the term proposed by Troncoso of "retinosis." But he stated that most individuals at 50 have copper-wire arteries and slight arteriovenous compression, and that he did not think that cases could be easily grouped in the different classes as proposed by Drs. Baird and Clay.

The wisdom of Duke-Elders admonition not to try to diagnose the general disease from the eye signs was recalled.

EAR, NOSE AND THROAT

COCAINE ADDICTION. DOES IT CONCERN THE OTOLARYNGOLOGIST?—Walter J. Bristow, M.D., Annals of Otology, Rhinology and Laryngology, Vol. 50, No. 4, page 1161.

This very excellent paper holds definite interest for any physician who uses cocaine for local anesthesia in his practice.

The author conducted an extensive investigation interviewing general practitioners, internists and psychiatrists, and corresponding with otolaryngologists and superintendents of hospitals for nervous and mental diseases in many parts of the country. He reviewed not only the American literature, but British, Canadian, Indian, French and German articles on the subject.

While some cases were reported of alcoholism and morphinism, particularly the former, when the patient would take any drug he could obtain such as veronal, luminal, cocaine and bromides while on a debauch, it is most remarkable that this thorough investigation failed to uncover a single case of pure cocaine addiction.

His conclusions are worthy of being quoted verbatim:

1. Cocaine addiction is excessively rare in the United States.
2. Otolaryngologists as a group should not be taxed with being instrumental in producing the cocaine habit among certain patients.
3. It is high time for some physicians to revise their ideas as to the habit-forming or addiction properties of cocaine.

AEROSINUSITIS, Paul A. Campbell, M.D., Major, Medical Corps, Archives of Otolaryngology, Vol. 35, No. 1, page 107.

In this article the author coins a new term "aerosinusitis" and describes the physics of the condition in a clear and lucid manner, illustrating by comparisons and diagrams.

In brief, the essayist demonstrates that as an aviator climbs upward to elevations of lower barometric pressure and rarefied air some of the heavier air in the sinuses passes through the ostium so that the pressure is equalized; and if there is any discharge in the ostium of the sinus, it is pushed into the nasal cavity where it causes no symptoms. On descending the procedure is reversed; and should there be discharge in the ostium of a sinus, the heavier air will force it into the sinus cavity; or if there is redundant tissue blocking the ostium, the air pressure may cause further blocking with some pain. This problem assumes greater importance when we remember that planes now climb faster than 5,000 feet per minute and dive at velocities in excess of 40,000 feet per minute.

As to treatment, the essayist states, "Consequently, at the end of a great descent, the swelling of the tissues and the production of fluid may be considerable. As soon, however, as equilibrium is established, which usually happens rather rapidly, the redundant tissue is released, air enters the sinus and recovery begins unless the insult is great enough to predispose the sinus to infection. Pain is experienced in a degree comparable to the rapidity of the descent. Recovery without infection is the rule, and a localized catarrhal sinusitis is the only unfavorable result. However, if the insult to the tissues is great enough and virulent organisms are present, purulent sinusitis can **result.**

"In keeping with the nomenclature of other conditions which are the result of similar alterations in barometric pressure, such as aeroötitis media and aeroëmbolism, this condition should be called aerosinusitis."

PEDIATRICS

EVALUATION OF HUMAN IMMUNE GLOBULIN IN MEASLES—Basman, Jack—West Virginia Medical Journal, 37: 491 (November) 1941.

The writer states:

"At present it may be said that active immunity against measles can only be acquired by attack of the disease. Many workers have offered evidence but no one has definitely proved that active immunity can be stimulated in any other way. Passive immunity is entirely another matter. There are two methods of giving passive immunity: (1) By injections of immune serum, which has the definite disadvantage of being difficult to obtain, and (2) by immune globulin, which is available commercially, but which may, in some cases, entirely prevent the disease. In large centers—serum can be obtained easily."

"The studies on the source of the immunity exhibited by infants up to the age of six months led McKhann and his associates to the discovery of human immune globulin. Their methods are by now well known, that is, the use of human placentae in the manufacture of human globulin. The impression at present is that human globulin is comparable in effectiveness to convalescent serum, with the additional advantage of being readily available. The reactions are slight, and certainly are not sufficient to contraindicate its use.

"Human immune globulin is commercially available in 2 cc. and 10 cc. vials. The dosage suggested is 2 cc. for children under 3 years who have been intimately exposed not over three days. Older children should receive 0.25 cc. for each year after 3 up to a maximum of 4 cc. As the time of exposure lengthens, the dose must be increased. The dose for modifying the disease after measles have developed ranges from 3 to 10 cc., depending upon the stage of the disease at the time of administration.

In this study the writer has confined himself entirely to the use of human immune globulin. "Lederle's human immune globulin was used. It was used chiefly with the hope of modifying the attack of measles, rather than preventing the disease, which is, as has been stated, the chief function of convalescent serum."

At the beginning of the epidemic to be reported the writer had mimeograph forms made to use in tabulating the cases of measles. He divided the study into two groups: (1) those having been definitely exposed either by members of the family or playmates, and (2) those having the disease. He attempted to obtain nearly the same number of cases for each group. "The first group was given human immune globulin as quickly as possible after exposure and never later than three days after the source of contact had developed a rash."

In the 64 cases of children receiving human immune globulin, 20 ranged from the age of 8 months to 2 years, 40 from 2 to 6 years. and 4 from 6 to 10 years. Eighteen of these 64 children were exposed by playmates, while 46 were exposed by members of the family. Eight children, or 12 per cent, did not develop measles; 50 or 78 per cent, developed modified measles, and 6 or 10 per cent developed severe measles comparable to the disease as seen in the control group. In this group of 64 children there were no complications. The average temperature was between 100 and 102.5 degrees, and the average days of illness, fairly sick, was 2 to 2½ days. Some of these children were not bedridden, and played as usual. This modified group of 50 children developed rashes rather mild in nature, the cough was not severe, and the entire illness was summed up by one mother as follows, "it seems a pleasure to have measles with the serum."

In the 60 patients of the control group, that is, those having measles without human immune globulin, the age group between 8 months and 2 years included 16 cases; between ages of 2 to 5 years, 43 cases, and between 6 and 10 years, one case. In 29 cases the source of exposure was a playmate, and in 31 cases the source of exposure was a member of the family. The average temperature ranged between 103 and 105 degrees F. There was one death in this group, a case of pneumonia that did not respond to the sulfonamides. The average illness was five or six days. There were numerous complications in this group. Pneumonia and otitis media seemed to be the main offenders and in many cases more than one complication occurred in the same patient.

The writer tabulated and compared "the groups which were completely protected by the human immune globulin and those who developed severe measles following human immune globulin. In the completely protected group it is of interest that two of the eight cases had contacts from playmates while the other six had contacts from members of the family. The age group was much younger than those who developed severe measles following human immune globulin." Of course, the writer was not positive "of the intensity or duration of the exposure and in younger children the human immune globulin may protect them completely. The serum was given intramuscularly. Under two years of age 2 cc. were given, and over two years of age 4 cc. were given."

The writer noted the reactions to the human immune globulin. "A rise in temperature seemed to be the main manifestation and in no cases was the reaction severe enough to warrant the discontinuation of the method of using the serum. In 14 children of the 64 there were no reactions at all.

COMMENT

I thought that this article on the Evaluation of Human Immune Globulin in Measles would be of special interest because we are having many cases of measles over the state at the present time. Our experience is similar to that of this author. We would especially urge that physicians use the immune globulin, especially on children who are very weak or subject to attacks of cold or pneumonia. But it is our practice to use it under all circumstances for attenuating measles in most instances, but in certain circumstances it is more important to give it early in maximum doses to prevent measles entirely.

ACQUIRED SYPHILIS IN CHILDHOOD AND EARLY ADOLESCENCE: RESULTS OF CONTACT INVESTIGATION—Dyar, Robert and Goodwin, Mary Hooke—American Journal of Syphilis, Gonorrhea and Venereal Diseases, 25; 704 (November) 1941.

This report is based on a 16-month survey from July 1, 1938, to November 1, 1939, in which time 76 cases of congenital syphilis was observed in the Family Clinic at the Johns Hopkins Hospital, and during the same period, 19 cases of acquired syphilis were diagnosed in children less than 14 years of age, or 20 per cent of the total number of new cases of childhood syphilis.

In this group of 19 children with acquired syphilis, "three of the patients were white, the rest colored; 14 were females, 5 were males. The ages varied from 11 months to 13 years with 11 children over 10 years, and 8 under 10. All of the patients had positive serologic tests for syphilis, and in 15 of the children the diagnosis of acquired syphilis was confirmed by dark-field positive genital lesions. In the 4 in which the diagnosis could not be so confirmed, there were records in the Johns Hopkins Hospital of previously negative serologic tests. Approximately half (10) of the group came voluntarily to various hospital clinics, complaining of genital lesions, sore throats, eruptions, or sores that would not heal, and were then referred to the Family Clinic. The other half came directly to the Family Clinic as a result of social service efforts associated with the investigation of the contacts of infectious adult or childhood cases."

"Widespread sexual activity among children under 14 years of age in the population served by the Family Clinic was uncovered by the intensive epidemiologic study of several cases of juvenile acquired syphilis."

"Investigation of the sexual and household contacts of 10 source cases of early syphilis in childhood led to the discovery of 14 infectious cases of syphilis, and 6 cases of latent syphilis not previously diagnosed."

From the examination of the sexual contacts of four of these colored children with early syphilis, "a total of 11 cases of infectious syphilis were discovered, 5 of them in children under 14 years of age; 2 cases of latent syphilis (1 under 14 years), and 4 previously known infections. Contact investigation of adult cases of early syphilis is seldom as productive.

"In addition to the cases of syphilis in the childhood group known to have been sexually transmitted, there were three cases in children under 14 years of age in which the sexual method of transmission was suspected but could not be definitely proved."

"A superficial survey of the socioeconomic factors in the households of the infected children suggests that crowded living conditions, unemployment, and the accompanying economic stress, are associated with the spread of acquired syphilis to a younger age group than is usually affected."

"The problem of acquired syphilis in childhood is one of general public health importance."

COMMENT

The authors are revealing the incidents of acquired venereal diseases in the age group where it is most familiar to the pediatricians of this country. I am afraid that we are going to see more of these diseases in the next few months or years than we have heretofore. I feel that this abstract would be interesting just at this time to the medical profession of Mississippi.

State Board of Health

Felix J. Underwood, M.D.

Venereal Disease Control in Part-Time Counties

In every war, communicable diseases have proved as devastating as the enemy's fire. Widespread movements of troops and shifts of population increase the necessity for vigilance in communicable disease control, putting to work all measures which modern medical science has proved effective. Since the personnel for putting these measures to work on the home front has been greatly depleted due to calls to military service, it means redoubling of effort on the part of those who remain, knowing full well that the health of the military populations is greatly influenced by the health of the civilian populations and vice versa.

Of all the communicable diseases, none have presented a more acute problem than the venereal diseases, and because they are a particular menace to the efficiency of the all-out defense effort they are receiving renewed emphasis at the present time.

Dr. A. L. Gray, director of the Division of Preventable Disease Control of the State Board of Health, announces that as a war emergency measure venereal disease treatment clinics are being established in the twenty-one counties of the state which operate only on a part-time basis in public health work. The specific purpose of the clinics is to treat selectees who have been rejected because of syphilis or gonorrhea in order that these men may be made ready for military service. This step has been necessary because of the large number of rejectees in these part-time counties where no facilities have been available as have existed in those counties with full-time health services.

It has been disclosed that already approximately twelve hundred selectees have been rejected in the part-time counties because of the venereal diseases and this number is expected to grow as new registrations are called for and mobilization increases. The infection in these counties revealed that only an occasional selectee was getting continuous treatment. This situation is being called to the attention of physicians in the part-time counties through group meetings and other media, and without exception the medical profession is gladly cooperating in the program in every way possible. As has always been the case during periods of peril, private practitioners have responded readily in doing their part for the nation's defense and safety. The program of venereal disease control is recognized as very vital in providing manpower and the physicians are offering their services on a rotating basis in operating the treatment clinics.

One or two clinics are being set up in each county, to which only selectees are to be admitted for treatment. The entire program is being financed by the State Board of Health, which is also providing nursing service. The county or town is being requested to provide quarters for holding the clinics. Dr. W. H. Weeks, for many years in practice at Doddsville, is organizing and supervising the program. As a private practitioner he has participated in the venereal disease program in Sunflower County for a number of years and had taken postgraduate study in venereal disease control. It is expected that by the middle of March the clinics will be in operation in all of these part-time counties and will continue throughout the duration of the war.

DIVISION OF LABORATORIES

Semi-Annual Report

Specimens examined by the Laboratory for the period July 1 to December 31, 1941, increased 29,830 over the same period for 1940, according to a report just released by Dr. H. C. Ricks, director. Compared with the first six months of 1941, there was a decrease in number of specimens examined of 48,943.

Increases were noted in the following:

Blood specimens for culture and agglutination tests, 2,913 as compared with 2,277 in the previous six months. This increase is due no doubt to the fact that typhoid fever and other enteric diseases are usually more prevalent during the last half of the calendar year.

There was an increase in the darkfield for diagnosis of primary and secondary syphilis of 68 examinations as compared with 22 during the previous six months. This increase was due to the increase in the number of patients referred by private physicians and the increase in the number of patients being referred by the medical department of the local army base.

There was an increase in the number of nose and throat swabs submitted for diagnosis of diphtheria, of approximately 1,000 specimens. This increase is probably due to better diagnostic and investigative procedures being used in counties where full-time health service has not previously been available.

An increase of 2,943 in the number of blood specimens submitted for examination for diagnosis of malaria is noted as compared with the previous six months of 1941. This increase is presumed to be due to the increased number of blood films submitted from reservoir areas in Tishomingo, Panola, and Tate counties.

An increase in the number of blood specimens submitted from animals for the diagnosis of contagious abortion is noted as compared with the previous six months of 1941. This increase in probably due to expansion of the daily industry resulting from demands made by the military areas for milk supplies. This activity is carried on by the State Livestock Sanitary Board.

An increase in the number of water samples submitted for bacteriological examination is noted. This increase is probably due to efforts of county health departments to safeguard the water supplies of schools and is also due to the examination of water samples for defense industries located within the state.

The number of water samples submitted for chemical analysis increased from 26 during the previous six months of 1941 to 144 during the present period.

There was a decrease in the number of specimens examined in all other instances. The decreases were probably due to seasonal fluctuations in disease outbreaks.

Total specimens examined for the last half of 1941, together with their results, are tabulated as follows:

	Positive	*Total Specimens*
Blood specimens for agglutination tests and culture	573	2,913
Specimens from suspected primary and secondary lesions for darkfield examination for diagnosis of syphilis	9	68
Specimens for laboratory diagnosis of diphtheria	1,568	9,523
Feces specimens for isolation and identification of pathogenic enteric bacteria	964	6,462
Specimens from genito-urinary tract and eyes for diagnosis of gonorrhea or opthalmia neonatorum	660	4,209
Feces specimens for identification of intestinal parasites	9,605	15,506
Blood specimens for diagnosis of malaria	470	13,442
Specimens of milk for bacteriological and chemical examination		2,739
Specimens for miscellaneous examinations such as blood counts, spinal fluid, cell counts, and the like		1,320
Specimens of sputum and other body fluids for typing of the pneumococci	15	**17**
Animal brains for diagnosis of rabies	62	**131**
Blood specimens for serological tests for diagnosis of syphilis	27,797	128,157
Specimens of spinal fluid for serological tests for diagnosis of syphilis	95	**742**
Specimens of bovine and porcine blood for diagnosis of contagious absortion	360	11,436
Specimens of sputum and other body fluids for laboratory diagnosis of tuberculosis	746	3,254
Specimens of urine for routine chemical analysis and microscopic examination		7,260
Urine specimens for isolation and identification of pathogenic enteric bacteria	127	5,755
Water specimens, public and private, for bacteriological examination	1.234	3,097
Water specimens, public and private for chemical analysis		144
Total Specimens Examined		216,175

	Total
Anti-rabies treatment prepared and distributed at cost	584
Typhoid vaccine prepared for distribution without charge to physicians and health departments	226,000 cc.
Silver nitrate ampoules prepared for distribution without charge to midwives, hospitals and physicians for the prevention of blindness in the newborn	25,048
Culture media prepared for use in bacteriological examination	2,566,700 cc.

MISCELLANEOUS NEWS NOTES

The State Extension Service and Department of Home Economics of Mississippi State College, through the State Nutrition Committee, have arranged for a series of three one-day nutrition meetings for three successive months in all the counties of the state. The program has received the unanimous endorsement of all groups in Mississippi interested in the field of nutrition. The State Board of Health, through its county health officers, is giving the program wholehearted support because of the far-reaching influence upon the health of the population in applying the newer knowledge of nutrition. The prevention of the deficiency diseases and the raising of the optimal level of health will contribute immeasurably to the efficiency of the defense effort at this time. The medical library of the State Board of Health is proving an excellent source for up-to-date books and articles covering this important subject.

MEDICAL LIBRARY

A microfilm reader is now available at the Medical Library to aid the physicians and health workers to bring the world's store of rich medical literature more closely to their finger tips. Articles not readily obtainable in the Library may be had at little cost (25c per article not exceeding twenty-five pages in length plus 10c for each succeeding ten pages or fraction thereof), upon application to the Medicofilm Service of the Army Medical Library's world's largest collection of medical literature. The film can then be projected upon a small screen in the State Board of Health Library, and one advantage over borrowing the original article is that the film does not have to be returned and may be filed away for future reference. Rare works which heretofore were unavailable except in libraries great distances away are now brought right to the research desk in microfilm form, thereby contributing another step to scientific advancement. Physicians, medical students, and others are invited to make use of the microfilm reader in the State Board of Health Library.

Dr. R. N. Whitfield, director of the Division of Vital Statistics, was elected vice-president of the Federation of State Medical Boards of the United States at the annual meeting of the Board of Chicago, February 17-18, 1942.

CHANGES IN THE LIST OF MISSISSIPPI

For the Week Ending February 21, 1942

ADD:

Dr. E. E. Busby to Canton, Madison County—practices in both Madison and Lincoln counties.

Dr. Toxey E. Hall to Indianola, Sunflower County—practices in both Humphreys and Sunflower counties.

Dr. R. G. Hand to Union, Newton County—practices in both Newton and Neshoba counties.

REMOVE:

Dr. J. W. Allen from Holmes County—deceased.

Dr. G. C. Andersen from Harrison County—gone to U. S. Army Medical Corps.

Dr. R. H. Atkinson from Yalobusha County—gone to Maxwell Field, Alabama.

Dr. C. T. Berry from Washington County—gone to Army.

Dr. J. P. Burton from Harrison County—gone to Tulane Medical School.

Dr. G. F. Crawford from Lafayette County—deceased.

Dr. Eugene W. Fiske from Harrison County—address unknown

Dr. Paul Getzoff from Harrison County—gone to Tulane Medical School.

Dr. R. W. Hall from Hinds County—deceased.

Dr. D. T. Imrie from Harrison County—gone to Tulane Medical School.

Dr. F. A. Johansen from Harrison County—address unknown.

Dr. J. B. Johnston, Jr., from Harrison County—gone to Tulane Medical School.

Dr. W. B. Moore from Madison County—address unknown.

Dr. A. T. Nadeau from Jackson County—gone to Augusta, Georgia, Army Camp.

Dr. Thomas Jurser, Jr., from Pike County—gone to Fort McClellan, Alabama.

Dr. D. L. Sprinkle from Harrison County—address unknown.

Dr. W. E. Wellman from Harrison County—gone to Tulane Medical School.

CHANGE:

Dr. E. A. Copeland, from 421 Woodrow Wilson Avenue to Walley Hospital, Jackson, Hinds County.

Dr. J. R. Lavender, from First Columbus National Bank Building to Stallworth Clinic Building, Columbus, Lowndes County.

Dr. R. E. Priest, from Rankin County to Health Department, Meridian, Lauderdale County.

Dr. H. H. Puryear, from Hinds to Carthage, Leake County.

Dr. O. A. Schmid, from Hinds to Whitfield, Rankin County.

Dr. H. A. Thigpen, from Jasper County to Puckett, Rankin County.

Mississippi State Sanatorium

THE DIAGNOSIS OF PRIMARY TUBERCULOSIS

The diagnosis of primary tuberculosis is not an easy matter, as the earlier the disease, the more difficult the diagnosis. We should think of tuberculosis in all suspicious cases in which no other diagnosis can be made. Frequently it happens in medical practice what is not looked for it not found. In the diagnosis of primary tuberculosis it behooves us to make use of every method at our command including history, symptoms, physical findings, and the results of special tests, such as x-ray, laboratory and tuberculin tests.

By primary tuberculosis, we mean the first infection with the tubercle bacilli. This infection, of course, does not occur only in children, but may happen at any age in which the individual is first exposed to an infecting dose of tubercle bacilli. The primary lesion is usually confined to the lower parts of the upper lobes or in the upper parts of the lower lobes (the parenchymal focus) and the tracheobronchial lymph nodes (the lymph node focus).

Evidence of value and a clue to the diagnosis of primary tuberculosis is derived from a carefully recorded history. A history of intimate association with one who has or one who recently has had pulmonary tuberculosis is very important as such contact almost inevitably results in infection.

The symptoms and clinical manifestations may be indefinite and the diagnosis must be made upon the probabilities rather than from certainties. However, the symptoms may be more pronounced, such as frequent colds, coughs, loss of strength and weight, slight elevation of temperature and pleurisies. Pleurisies, especially pleurisy with effusion, should be considered tuberculous until proved otherwise.

Of physical findings, it must be said that they are usually absent except in well-defined lesions. In the parenchymal type with distinct infiltration near the periphery, there will be slightly increased whispered voice sounds and a few rales of harsh breath sounds over the areas of infiltration, on auscultation. In the nodular type, there will be impaired resonance on percussion and increased whispered voice sounds on auscultation in the second and third interpaces, near the sternum and along the spinous processes of the thoracic vertebrae.

The x-ray and tuberculin test are the most helpful aids in the diagnosis of primary tuberculosis. Most primary infections will be diagnosed by the x-ray and tuberculin test rather than because of illness on the part of the individual. Some, however, will be suspected by the symptomatology, physical signs and a positive tuberculin test when the x-ray reveals no definite pathology. The x-ray usually reveals homogeneous pneumonic shadows; enlarged lymph nodes may be visualized as a widening of the hilar shadows and possibly the mediastinum. Also there may be peri-bronchial and peritracheal thickening, fibrous strands or ultimately Ghon tubercle, and evidence of calcification along the hila and in the parenchyma of the lungs.

The tuberculin test is also a very effective method of determining an infection. A positive reaction shows that a tuberculous focus exists somewhere in the body but does not mean disease. A negative reaction on the other hand cannot be interpreted as one hundred per cent evidence of the absence of infection because errors in technique and certain diseases present interfere with the reaction taking place. All negatives should be checked with a tuberculin test and all positives should be x-rayed at least once a year.

BRONCHIECTASIS

Bronchiectasis is defined as a dilation of the bronchus. There are two main types, cylindrical and saccular. The affected bronchi may be infected, wet type, or more rarely, there may be no infection, the dry type. The wet type is usually saccular and the patient may produce several ounces to a pint or more of sputum daily. The sputum is purulent in character and occasionally has a foul odor. The dry type is more frequently of the cylindrical type. These patients have hemoptysis which may be so extensive as to be incapacitating.

The causes of bronchiectasis are many. The various causes are congenital, peribronchial pneumonia accompanying measles, whooping cough, etc., foreign bodies, long-standing atelectasis as a result of postoperative atelectasis or an unexpanded lung following empyema. Asthma emphysema and pulmonary fibrosis usually are accompanied by mild diffuse cylindrical bronchiectasis. Sinusitis has been accused of causing bronchiectasis.

The wet saccular type of bronchiectasis is a slowly progressive disease. It usually spreads from the lower lobe to the lingula of the upper lobe, and involves the base of the lung in the opposite side. A recent report gave the average duration of life as thirteen years after onset of symptoms. The patient usually dies of pneumonia.

The only treatment of any value is the removal of the affected portions of the lung. Since the disease is rarely limited to one lobe, the operation usually consists, on the left, of lobectomy and lingulectomy of the upper lobe. On the right, the lower lobe, middle lobe and, occasionally, a portion of the upper lobe are removed. The lung remaining in the chest fills the space of the removed lobe. The bronchiectatic lobe is rarely of much functional value so that the patient retains the same amount of functional lung as before the operation.

The dry type of bronchiectasis with hemorrhage should be treated by lobectomy similarly to the wet type. The hemorrhages may not only be incapacitating, but may be life endangering.

Two types of lobectomy are being done at the present. When it is possible to dissect out the hilum the vessels and bronchus are individually ligated and the wound closed without drainage. If dissection of the hilum is impossible, mass ligation of the hair stump of lung is necessary. This procedure usually results in empyema so that drainage is instituted at the end of the operation. The empyema prolongs the postoperative course.

The operation should not usually be done on patients over forty years of age or under six years of age. The mortality rate is less than five per cent, less than the mortality rate for operations on the stomach and gallbladder.

The diffuse cylindrical type of bronchiectasis accompanying asthma, emphysema, and pulmonary fibrosis can be treated only be medical measures such as lipiodol injections, ammonium chloride, etc. The treatment is generally ineffective, but may give some symptomatic relief.

Woman's Auxiliary
TO THE
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ALCORN COUNTY MEDICAL AUXILIARY

The Alcorn County Auxiliary have mapped an all-out program of specific objectives, and their work got under way at this month's meeting. With the national defense effort uppermost, the members assembled first-aid kits and placed them in all the schools of Corinth and in the public school at Kossuth. They agreed to maintain these kits for a year.

The group also offered its services should a blood bank be located in Corinth. The town has been discussed in defense circles as a probable strategic location for this emergency service.

NORTHEAST THIRTEEN COUNTIES AUXILIARY

The members of the Northeast Mississippi Thirteen Counties Auxiliary met for the first quarterly session of the year in Booneville. Mrs. L. L. McDougal joined Mrs. W. H. Anderson in welcoming the members. Presided over by Mrs. Stanley Hill, of Corinth, the meeting was highlighted by talks from Dr. Augustus Street, president of the State Medical Association, Mrs. W. K. Stowers, president of the Auxiliary to the State Association, and Mrs. A. Street, who is very active in her local and state organizations.

Dr. Street urged the doctors' wives to inform themselves and then to find ways of helping their husbands render more and better medical service. He thinks it is important that they be a constant inspiration to their doctor-husbands. "A doctor's success is more or less a measure of his wife's goals for him," he said. He also suggested that dues to the medical society should include the doctor's wife's membership in the auxiliary.

Mrs. Stowers presented the role of the doctor's wife in the national emergency. In outlining her follow-up of Dr. Street's advice, she said, "It is she who can take the lead in her community by being among the first to volunteer her services in first-aid, Red Cross, lay information and other defense preparations."

Mrs. Street, for years an outstanding worker in Red Cross undertakings at Vicksburg, told how auxiliary members in her community had equipped themselves in first-aid classes and are ready to teach other classes. She stressed, however, the opportunity open to doctors' wives to improve the nutrition of civilians, especially children and expectant mothers. "With proper nourishment figuring so largely in the total war effort, medical circles should not leave this responsibility to lay groups. Our doctors will face a different order after this war, and one nearer state medicine. If we want them to continue to enjoy independent practice, why do we not feel it is our duty to help raise the community health levels? Let us be among those who are devoting their time to lay information on nutrition, child care, accidents and prevention of disease."

Mrs. V. B. Philpot, president-elect of the state organization, led an open forum on ways doctors' wives can create or find places of effective leadership, and aid in work the profession would have accomplished.

Following the meeting the honor-guests were complimented with a tea. Mrs. Stanley Hill of Corinth presided at the tea service, and Mrs. A. J. Stacy of Tupelo, secretary of the auxiliary, poured coffee.

MAKE RESERVATIONS NOW

Haddon Hall will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the American Medical Association, which will be held in Atlantic City, New Jersey, June 8-12, 1942.

Requests for reservations should be sent immediately to Haddon Hall, Atlantic City, New Jersey.

DOCTOR'S DAY OBSERVED BY SOUTH MISSISSIPPI AUXILIARY

The members of the Auxiliary to the South Mississippi Medical Society and their husbands were graciously entertained with an open house by Dr. and Mrs. T. E. Ross of Hattiesburg the first Sunday afternoon in March. The occasion was especially successful because the doctors and their wives lingered longer to chat together and enjoy the hospitality of their hosts on the Sunday afternoon.

Lovely spring flowers added to the charm of the tastefully appointed reception suite. The teatable in the dining-room captured the freshness of the season with a fragrant mixture of narcissi and other early flowers. In keeping with the spirit of conservatism imposed by war, the affair was simple yet greatly enjoyed.

HAVE IT COPIED

Auxiliaries are urged to have the manual, *Let Them Lie*, reproduced in their local newspapers. Turn to page 502 in this issue for this series of articles prepared for the lay public.

A Victory Clinic

For Mississippi

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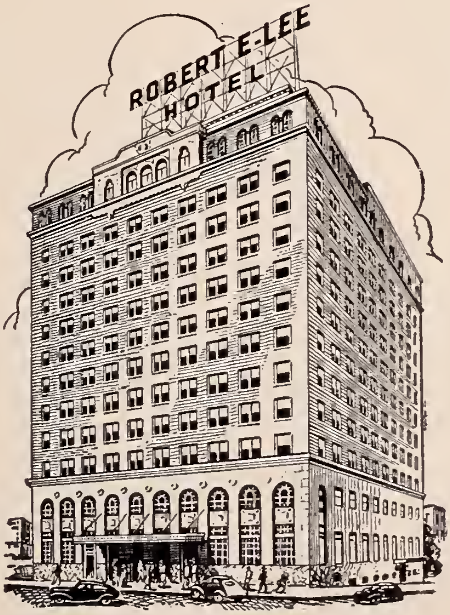

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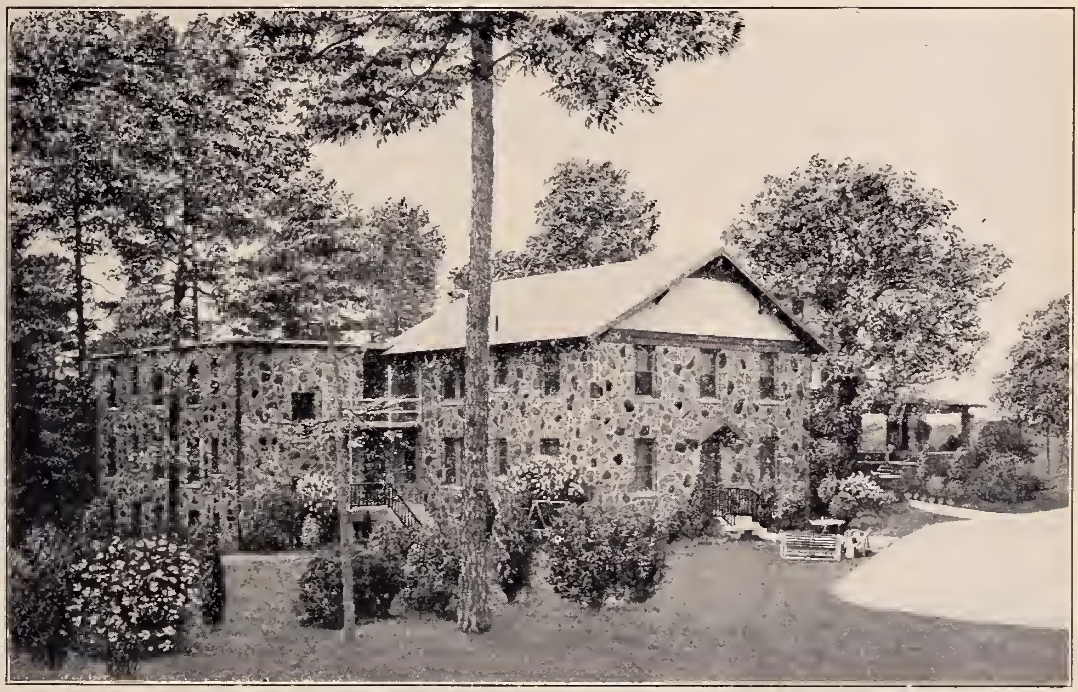

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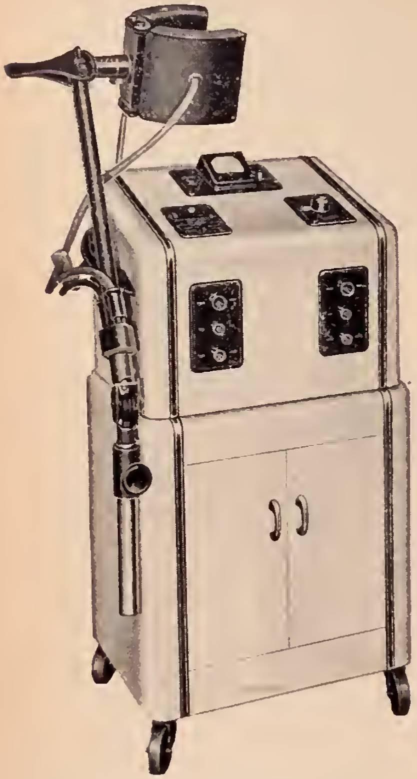

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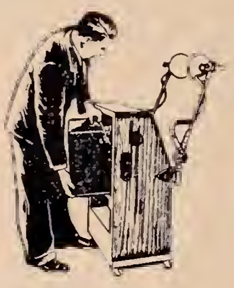

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SUCH common neuritic symptoms of pregnancy as pains in arms and legs, muscle weakness, and (less frequent but more serious) paralysis of the extremities may result from a shortage of antineuritic vitamins, recent investigations appear to show. Although neuronitis of pregnancy has long been considered a toxemia, no toxins have ever been identified.

Clinical observations of Strauss and McDonald lead to the conclusion that the condition is a dietary deficiency disorder similar to beriberi, caused by lack of vitamin B_1, complicated by symptoms which may be traced to shortage of vitamin G. They report recovery in their cases receiving this therapy, including dried brewers' yeast.

Hyperemesis as Cause of Avitaminosis

Wechsler observes that all cases of polyneuritis of pregnancy recorded in the literature were preceded by long periods of severe vomiting. "It would seem," he adds, "that because of actual starvation these patients suffered from avitaminosis and consequent neuritis," a view likewise held by Hirst, Luikart, and Gustafson. Plass and Mengert observe that the practice of giving high carbohydrate feedings for hyperemesis gravidarum is still more likely to cause avitaminoses B and G.

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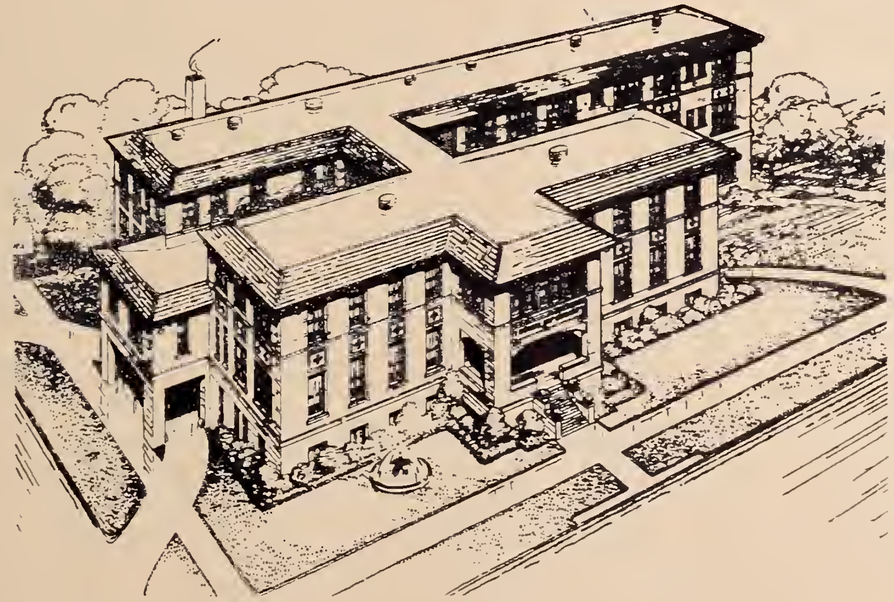

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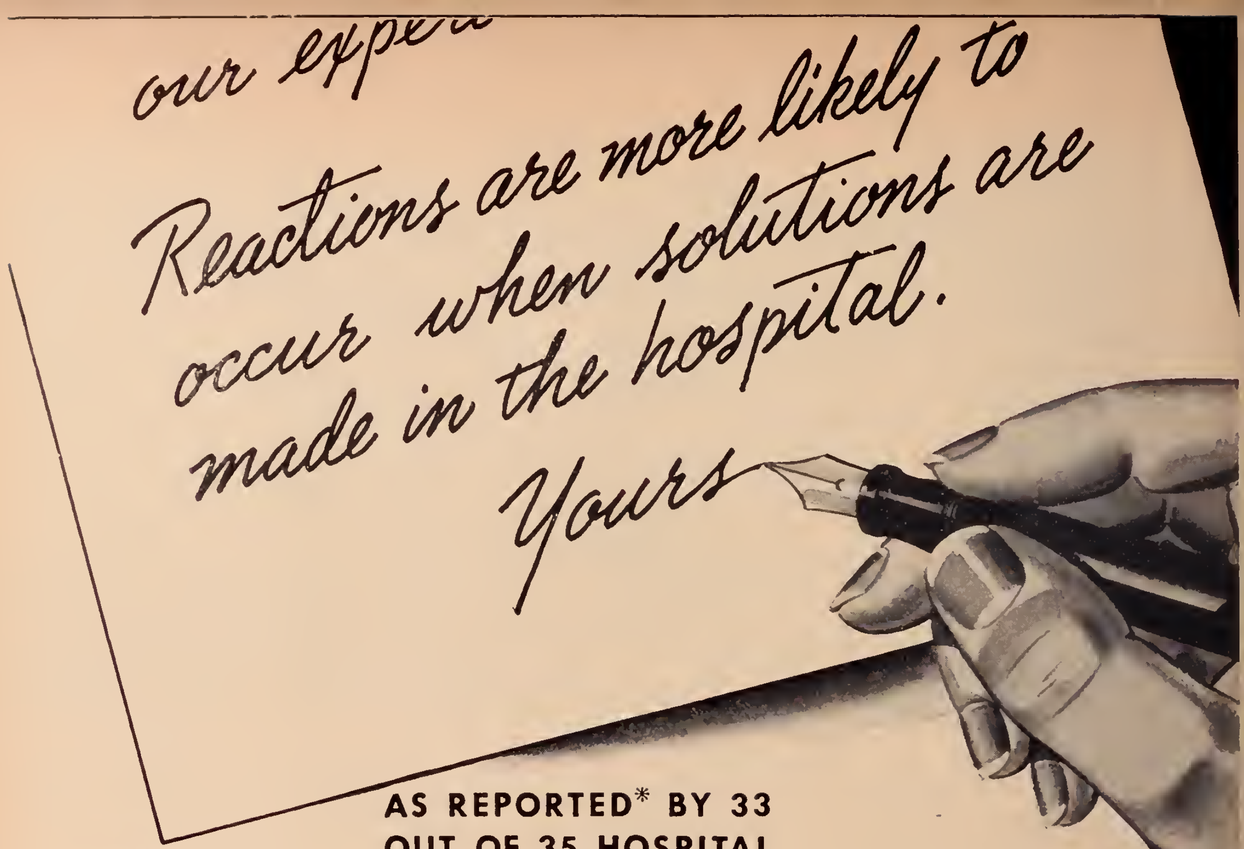

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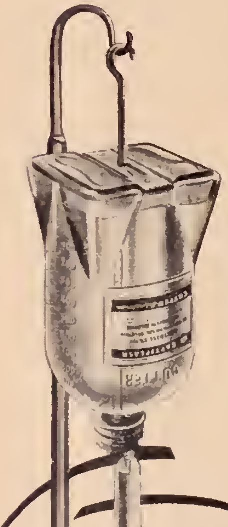

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Clinical Significance of Hoarseness*

FRANCIS L. LEDERER, M.D.
From the Department of Otology, Rhinology and Laryngology, University of Illinois College of Medicine
CHICAGO, ILL.

ALTHOUGH THE number of diseases of the larynx which one meets with only infrequently is fairly large, a laryngologist is certain, at one time or another, to observe at least one of these. Consequently, conditions less commonly encountered must be kept in mind constantly in making the differential diagnosis of laryngeal pathologic processes. It is particularly true in the practice of laryngology that the elimination of all possibilities but one makes for a correct diagnosis. The early recognition of laryngeal disease is such a simple matter that timely and adequate therapy is attainable to a high degree.

Most forms of laryngeal disease have many symptoms in common as manifested by interference with essential functions—the phonation, respiration, and deglutition. When one considers the lymphatic and nerve supply of the larynx, and its position in the structural framework of the neck, it is comparatively simple to visualize the multitudinous variety of acute and chronic inflammations, disturbances of innervations, and changes as the result of external as well as local and systemic factors that are capable of affecting this organ.

One of the most intriguing studies in medicine is the differentiation of disease entities which have a similarity of symptoms. Hoarseness is one of those symptoms. Hoarseness is defined as roughness or discordance in the quality of the voice. The voice is influenced by an alteration of its pitch or its intensity, or of both. The symptoms of hoarseness fall into two general, all-inclusive classes on the basis of pathogenetic factors alone: (1) those changes which influence the voice (either intensity, pitch, or quality) without a pathologic process in the larynx itself, and (2) those locally acting causes which produce the hoarseness by a lesion within or directly external to the laryngeal chamber. The causes of such changes are numerous and must be known, not alone to the laryngologist, but to the general practitioner, who must be made to appreciate the importance of voice changes, and to the layman, who must be made to realize that this symptom is a danger signal of laryngeal dysfunction ("voice and hoarseness conscious").

There are numerous congenital anomalies and deformities of the larynx which are manifest at birth. As man progresses through life, there is perhaps no organ, by virtue of its position and function, which is subject to greater abuse or mistreatment. Diseases of the upper and lower respiratory tract, vocal abuse, systemic disease, diseases of the surroundings of the larynx and external irritants are largely responsible for the many abnormal manifestations. Some of these forms of laryngeal disturbances are considered as pathologic entities, according to their outstanding symptoms, and according to the form of the disease which they accompany. It is natural that many of the etiologic factors overlap and are not easily separated; nor is it a simple matter to separate pathologic stages into entities. The term "laryngitis" refers to an acute or chronic inflammatory condition of any part of the larynx, interfering with normal respiration or phonation. There are in addition noninflammatory conditions which similarly may affect the larynx, these being mainly disturbances of its innervation.

In the diagnosis of the laryngeal disease every available means at the command of the physician must be utilized. It must be borne in mind that hoarseness and inspection do not always enable the establishment of a diagnosis objectively. The laryngeal mirror must replace the guesswork which is so commonly employed in the diagnosis of hoarseness. It is too often assumed that hoarseness is due to an irritant source and that a régime of voice rest and tincture of benzoin inhalations will clear up the condition. No one would attempt to make a diagnosis of a pulmonary affection without properly auscultating and percussing a chest, or conclude the presence of a kidney condition without a urinalysis or a functional test.

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*Delivered at the fifty-seventh annual session of the Mid-South Postgraduate Medical Assembly, Feb. 10-13, 1942, Memphis, Tenn.

ACUTE LARYNGEAL DISEASE

ETIOLOGY: This type of laryngitis is the result of conditions including local hyperemia, caused by the over-use of the voice, by mechanical or chemical irritation, by climate changes, or by contiguity of structure. Infections may also be blood-borne. Men appear to be more susceptible to laryngeal irritation than do women, doubtless because they are more commonly exposed to occupational injuries and indulge to a greater degree in deleterious habits. Excessive use of the voice, for example, ingestion of hot, spicy foods, varying diets, and irregular mode of living, abuse of alcohol and tobacco, not uncommonly are the cause of laryngitis.

Inflammation may extend into the larynx by contiguity of structure, following the effects of undue exposure and other predisposing factors upon the mucous membranes above the level of the larynx; voice abuse further predisposes to injury by irritation. Obstructive lesions within the nose, for example, necessitating mouth breathing, are at times, directly or indirectly, causal agents; chronic forms of rhinitis and chronic pharyngitis are often responsible. Trauma from wounds, injuries, strangulation, and foreign bodies also cause laryngitis.

The acute exanthemata (scarlet fever, measles, chickenpox, and smallpox), influenza, pertussis, typhoid fever, diphtheria, and erysipelas are not infrequently accompanied by, and are therefore etiologic factors in, laryngeal involvement (symptomatic laryngitis).

Acute inflammatory dermatoses comprise a large number of conditions in which the larynx becomes affected (exudative laryngitis). Among these are erythema nodosum and multiforme. symptomatic erythema (toxic and drug), angioneuroses, such as urticaria and acute circumscribed idiopathic edema (Quincke), herpes recidivans, miliaria, and eczema. There are also some of the acute or chronic inflammatory dermatoses, such as pemphigus, epidermolysis bullosa hereditaria, impetigo herpetiformis, and impetigo vulgaris (Unna), in which not infrequently one observes manifestations of the disease in the larynx. Diseases of the hematopoietic and lymphatic systems, such as anemia, chlorosis, pernicious anemia. malignant neutropenia, leukemia, purpura, and scorbutes are often complicated by laryngeal manifestations.

PATHOLOGY: Because of the varied types of involvement and the multiplicity of causative factors, a considerable number of pathologic changes are to be considered. Infection reaches the various parts of the larynx through the blood or lymph stream, by direct local infection, or by chemical or mechanical irritation. Acute laryngitis is hyperemic, exudative, or ulcerative in nature. All parts of the larynx are likely to become involved, including the subglottic area. Swelling of the subglottic area is at times sufficient to cause its projection beyond the borders of the cords (laryngitis subglottica). Essentially there is at first an ordinary inflammatory process, with hyperemia of the laryngeal structure associated with a slight serous, and later a mucoid, exudate. Slight edema is present, occasionally becoming severe enough to be alarming. When the cords become edematous, they cause pressure against one another and produce decubitus ulcers. Contact ulcers occur near the vocal process, as a result of excessive use of the voice during an acute stage of laryngitis. Perichondritis and ulceration followed by necrosis may occur. Membranous formation is occasionally observed. Later, when the process subsides, scarring and a possible deformity may result.

The organisms usually found are the pneumococcus, streptococcus, Bacillus influenza, and Bacillus coli communis. The organisms are thought to penetrate the deeper structures through minute abrasions of the surface, or by way of the lymph channels or the blood. The exanthematous fevers have a tendency to produce a phlegmonous type of inflammatory lesion.

SYMPTOMATOLOGY: The symptoms of a simple laryngitis vary according to the intensity of the local processes, ranging in extent from those of a simple serous inflammation to that of the most severe edema, urgently requiring tracheotomy. There is usually an acute onset, with symptoms depending upon the cause and severity of the condition. In individuals in whom the voice is not subjected to more than ordinary use, an attack of acute rhinitis frequently precedes the laryngeal disorder. There is a feeling of malaise, a rise of temperature to 100° to 102° F (38.3° to 38.9° C.), and sensations of chill. The voice is lowered in pitch and the patient complains of a sensation of tickling, dryness, rawness, a constant desire to clear the throat, and sometimes a feeling of constriction. Discomfort in speech, which at first is due to dryness of the mucosa, is followed by changes of the voice in quality and pitch. Later, with infiltration and thickening of the cords, the voice becomes husky and hoarse. Aphonia develops when there is paresis of the cords. The voice becomes easily fatigued, and its continual use prolongs the inflammatory process and tends permanently to injure the integrity of the vocal organs.

Cough is frequently present at first, with little expectoration, the mucosa being very dry. Later there is expectoration, which is first thin and scanty, becoming jellylike and viscid and then mucopurulent as well as more copious. Secretions may be thick, sticky, and brown. The secretion at times is so thick as to lead to membranous formation. Occasionally expectoration tingled with blood appears after violent coughing. There may be pain on swallowing and tenderness on external pressure over the larynx. Dyspnea is slight and severe if edema and ulceration are present. Dyspnea may also be brought about by bronchospasm and the agglutination of the bronchial lumen by secretions.

The laryngoscopic picture naturally varies with the severity of the infection. Examination sometimes yields but little evidence of inflammation. There are varying degrees of hyperemia, ranging from simple injection, in which case distinct blood vessels can be seen along the cords, interarytenoid area, and elsewhere in the larynx, to deep, cherry redness throughout the entire larynx. The irritative type of redness varies from that seen in simple inflammation to that of an ecchymosis. With active hemorrhage the side of the blood-vessel rupture can be seen.

Motility of the cords is interfered with by edema of exudation, or by deep infiltration of the tissues, which may even produce paresis. The edema varies from a simple swelling to an intensity giving rise to alarming symptoms. In some instances the inflammatory reaction involves the subglottic area, projecting beyond the borders of the cords.

DIFFERENTIAL DIAGNOSIS—The management of a sudden attack of dyspnea demands quick and logical thinking. A differential diagnosis must consider laryngeal stridor, fracture, the various inflammatory processes (perichondritis, edema, diphtheria), neoplasms, foreign bodies in the respiratory passage, and laryngeal paralysis.

PROGNOSIS—An attack of acute laryngitis ordinarily passes off in a few days without any ill effects. The prognosis is good except in the severe forms. Formation of scar tissue interferes with laryngeal function.

TREATMENT—(1) Prophylaxis. Care of nasal and pharyngeal conditions is to be emphasized. Attention to voice hygiene and general habits, including environment and occupation, is important. It is generally the professional voice users who seek the advice of the physician, in order that their work may not suffer from any interruption. They are, for this reason, poor patients to deal with at the very onset, being not fully coöperative but rather flighty and with ideas of their own as to what constitutes the proper care of the voice.

(2) General Therapy. The patient is ordered to bed in a warm, moist, well-ventilated room devoid of irritating vapors. Foods should be neither too hot nor too cold, though many patients are made more comfortable by swallowing ice cream or cracked ice. Spicy foods are to be eliminated from the diet. The patient should take ample fluids. Acetylsalicylic acid is prescribed if there is fever. Liquor ammonii acetatis in one-half doses combined with 10 minim doses of spiritus etheris nitrosi and 10 grains of potassium bicarbonate may be administered every two hours. Rheumatic disorders are best treated with sodium salicylate or with sodium benzoate five grains (0.3 gm.) every three hours. Elimination is important. Enemata are immediately effective. Treatment of contributory diseases must not be overlooked.

(3) Local Therapy. Rest of the voice is the all-important measure. Full coöperation is essential because it is possible to injure the voice permanently if complete rest is not observed. Cold, moist compresses to the neck at first are very soothing. Ice collars may also be employed. Some prefer heat in the form of moist packs, but all of these measures are matters of individual preference. Inhalation of steam impregnated with various preparations is quite effective, the beneficial influence of moisture becoming most important. The medication is usually put into a dish or kettle of hot water (140° to 150° F.). A funnel-shaped contrivance can be placed into the spout of a kettle and the mouth and nose held near it,

or the patient can arrange to inhale the steam under a sheet. In order to prevent overstrain deep inhalation should not be forced. The patient should remain indoors for at least one hour thereafter, or carry out the treatment before bedtime, that is, if his local or general condition does not confine him to his home altogether. Menthol, creosote, oil of pine, tincture or benzoin compound, or camphor may be administered with steam inhalations.

Other solutions may be employed locally, such as the following: tannin (1 per cent); zinc sulphate (4 per cent) or sulphocarbolate; menthol emulsions; carbolized iodotannin; colloidal silver (solargentum, 10 to 20 per cent); ferric chloride, 20 grs. (1.3 gm.) to the ounce (30 cc.); soda bicarbonate; Dobell's or salt solution; resorcinol or alumnol, 7 grs. to the ounce (0.45 gm. to 30 cc.); and silver nitrate (½ to 1 per cent).

Relief of the cough is essential if the larynx is to be put at rest. Sedatives, such as codein (elixir terpin hydrate with codein N. F.), bromides, and the barbiturates, are effective. Expectorants, such as ammonium chlorid, ammonium carbonate, and ipecac are helpful.

(4) Treatment of Complications. Hemorrhage is quieted to some extent by the judicious use of morphine to put the patient at rest; more active measures are ice by mouth and externally in the form of a collar, and the topical application of astringents (ferric chloride or silver nitrate). For dyspnea a steam tent and aspiration of mucous are essential. Intubation or tracheotomy (low) in asphyxia may be necessary. Diaphoresis and catharsis should be promoted to reduce toxemia.

CHRONIC NONSPECIFIC LARYNGITIS

ETIOLOGY. Nonspecific, acute inflammatory diseases frequently affect the larynx; repeated attacks lead to chronic pathologic changes within this structure, which are of primary origin. Such factors as faulty or improper use of the voice (singers, public speakers, hucksters, and peddlers), and exposure to adverse climatic changes (office workers) and to dust or fumes (stone cutters and chemical workers), commonly predispose the larynx to chronic irritative phenomena. The latter group of irritants is designated as external factors.

The usual sequence of events resulting in the development of these tissue reactions begins with the disease elsewhere than the larynx. Consequently etiologic factors in nonspecific chronic laryngitis consist chiefly of those which exert an irritative effect upon the larynx coincidental to a relatively remote focus. The resulting laryngeal changes are secondary (secondary nonspecific laryngitis). Such factors are local or systemic. The local causes include upper and lower respiratory diseases exerting their influence by contiguity of structure, blood stream or lymphatics, nasal obstruction, naso-pharyngeal disease, and tumors of the neck and thorax (by venous stasis). The systemic causes include the debilitating diseases, such as rheumatic diatheses, secondary anemias, chlorosis, acute and chronic infections (exanthem, tuberculosis, syphilis, osteomyelitis), affections of remote organs (pelvic and abdominal), and hepatic and renal-cardiovascular diseases. Chronic alcoholism exerts a two-fold effect; directly, by producing hyperemia of the larynx; and indirectly, by undermining the general physical status of the individual.

PATHOLOGY. The clinicopathologic classification of chronic forms of nonspecific laryngitis is as follows:

1. Chronic hyperplastic laryngitis (diffuse or circumscribed).
    (a) Simple laryngitis
    (b) Chorditis nodosa or tuberosa
    (c) Pachydermia laryngis
    (d) Hemorrhagic laryngitis
    (e) Subglottic laryngitis
    (f) Contact ulcer
2. Laryngitis sicca
3. Chronic perichondritis and arthritis

CHRONIC HYPERPLASTIC LARYNGITIS

SIMPLE LARYNGITIS. This is a diffuse hyperemic form of chronic laryngitis. The changes vary according to the extent and degree of the hyperemia. If the irritation is constant enough, the alterations of the mucosa progress together with vascular changes within the submucosa which result in thickening the whole. Areas particularly prone to these changes are the interarytenoid and the vocal cords themselves. The cords lose their normal luster and contour; the vessels appear distinct, traveling part or all of the length and width of the cords. The cords approximate grossly, but are rounded at the edge and prevent normal phonation. Small collections of stringy, cream-like mucous are seen at times in the manner of a film across the glottis when opened. Sometimes the cords appear relaxed, and their edges do not quite approximate. An elliptical opening is occasionally observed at the posterior commissure, especially when there is some interarytenoid infiltration.

CHORDITIS NODOSA (*Singer's nodes*). This entity is discussed at some detail under "laryngeal tumors." These nodes are found in singers and in those who otherwise misuse their voices. There is seen a heaping up of epithelial cells at the junction of the anterior and middle thirds of the free border of the cords, in the form of small hornified tumors (not unlike "corns," grossly, though microscopically differing materially). They result from a circumscribed hyperplasia of the epithelial and/or subepithelial layers. Such lesions may be unilateral; when bilateral they are opposite each other, thus preventing complete approximation of the cords at these points. There is increased vascularity at the base of the nodes, but no other evidence of an inflammatory reaction.

PACHYDERMIA LARYNGIS. In this type of laryngeal pathology the normal ciliated epithelium changes in some areas to the pavement variety, which piles up as hornified epithelium against the true cords and the interarytenoid area. The cords are roughened, and small warty or nodular excrescences develop along the edges. There may be small elevations on one cord and corresponding depressions where they touch the other side. The middle and posterior portions of the cords are most frequently affected. This condition is usually seen in hucksters and in those suffering from chronic nasal hypersecretion. In the latter group the continual postnasal dripping of irritating secretions into the pharynx and larynx predispose the vocal cords to hyperplastic and hypertrophic changes. The hypertrophy involving mucosal and submucosal epithelial elements may display itself as a uniform thickening (pachydermia diffusa) without projections; the term pachydermia verruca is applied to that type in which elevations are formed.

HEMORRHAGIC LARYNGITIS. In the simple type of laryngitis there is dilatation of blood vessels and interstitial infiltration leading to mucosal hypertrophy. The superficial vessels tend to become tortuous and varicose, especially in the regions of the ventricular bands and interarytenoid area, where the tissues are lax. Hemorrhagic swellings into the submucous tissue thus occur, and these may become organized. Usually such changes are visible on the anterior surface of the cords or on the edge, most often extending into the submucosa.

SUBGLOTTIC LARYNGITIS. This condition is characterized by infiltration of the mucosa below the true cords. The thickening may be sufficient to obstruct breathing or interfere mechanically with the movement of the vocal cords in phonation.

CONTACT ULCER. The pressure exerted by the violent contact of one vocal process against a hypertrophic area on the opposite cord may produce a superficial ulcer on such an infiltrative lesion. A tiny point may be present, denoting an exposure by an ulceration of the tip of an arytenoid cartilage. Surrounding the zone of ulceration is reddened mucosa. The ulcer is at times grayish in appearance or may have the color of the surrounding tissue. Occasionally there is a tendency for tissue to granulate. The hyperplastic tissue of the opposite cord fits into the bed of the ulceration, as in decubitus ulcers. In the last analysis, the pathologic alterations are those of chronic inflammation with superficial ulceration.

LARYNGITIS SICCA. This form of laryngitis usually coexists with atrophic rhinitis and pharyngitis sicca. The changes are alike in all three, namely: crusts which are difficult to peel off appear on the cords; decomposition of the secretions produces a foul odor; and the mucosa appears dry and glazed, as though varnished. Greenish crusts are observed closely adhering to parts adjoining the vocal cords. Atrophy of the mucosa and the secretory glands takes place, and the normal ciliated epithelium is replaced by the squamous type. This process often involves the trachea. The secretion tends to become mucopurulent, adhere firmly to the mucous surfaces, and then become desiccated. Dry crusts frequently form extensive casts, impeding the free passage of air and giving rise to dyspnea, while the breath is rendered fetid.

CHRONIC PERICHONDRITIS AND ARTHRITIS: Cricoarytenoid joint mobility is interfered with by the diverse abnormal conditions which directly or indirectly affect the larynx. The hindrance may be partial or complete, in the latter case resulting in fixation or ankylosis.

Inflammation of the laryngeal joints is probably more common than is usually realized, its apparent rarity being attributable to the difficulty of properly interpreting the indefinite symptoms and of obtaining sufficient postmortem data. Involvement of the laryngeal joints is not uncommon in cases of rheumatic or gonococcal arthritis, while some of the infectious diseases, e. g., typhoid fever, influenza, diphtheria, variola, tuberculosis, and syphilis occasionally manifest symptoms indicating extension to the cricoarytenoid joint. When serous or seropurulent exudation takes place, the periarticular tissue becomes greatly distended by edema and infiltration.

SYMPTOMS: In general, the symptoms of all forms of chronic laryngeal diseases are similar. There are gradations of voice change. The alterations are a matter of degree of loss of tonal range, fatigue, or loss of control. Therefore, it is muffled, is tired, "breaks," is rough or is hoarse. Hoarseness is usually worse in the morning. Unless it is overused, the voice improves as the day proceeds, because of the clearing out of pharyngeal and laryngeal secretions. There is great difficulty in sustaining the voice. The larynx cannot be depended on, especially for singing, as the tone breaks or cracks.

The secretion appearing on the vocal cords varies in quality and character. It is usually small in amount, thick and tenacious, sometimes assuming the form of slugs or crusts. Cough, although by no means a constant symptom, occurs if secretions are present. A tickling sensation of dryness and irritation induces a hawking effort to relieve the dryness and irritability. Pain is usually not present except in a perichondritic process or during an attack of acute laryngitis. There is a sensation of constriction as if a foreign body were present. Dyspnea in the atrophic and subglottic forms is due to crusts or swelling.

The laryngoscopic picture varies considerably in proportion to the degree of inflammation. The entire larynx, or portions of it, appear hyperemic, varying from a slight arborescent and light pink tinge to a bright red color indicative of violent inflammation. It is apt to assume a brownish-violet hue. The mucosa thus affected is thickened at times. Changes characteristic of the various forms of chronic laryngitis may be noted.

In certain cases, during an exacerbation of a catarrhal process, the vocal cords will present the greatest amount of congestion, as compared with other sites of the larynx. The mucosa of the cords appears thickened, bosselated, and intensely red at the edge. The voice is coarse and screechy when an effort is made to sing. This form of chronic laryngitis is characterized by frequent exacerbations, finally leading to total loss of voice unless singing is given up for a time while undergoing active treatment.

DIAGNOSIS: This history is important; alterations in voice are significant. Hoarseness and inspection do not always enable the establishment of a diagnosis objectively. Causes other than those of an acute process, such as paresis, thickening, or a polyp, are to be found. Occasionally biopsy is essential before a diagnosis can be made definitely.

DIFFERENTIAL DIAGNOSIS: Neoplasms, foreign bodies, syphilis, scleroma, diphtheria, tuberculosis, and paralysis must be excluded. Through the span of his professional activity, a laryngologist comes to realize more and more that every cause of continued hoarseness must be considered in arriving at a proper diagnosis. While he may tentatively feel that a certain condition exists, it is his desire to rule out by elimination those diseases which present analogous laryngeal pictures.

TREATMENT: The frequent association of chronic inflammations of the nasopharynx and those of the larynx renders it imperative always to examine the entire upper respiratory tract when there is a history of long-continued hoarseness. This conclusion is further supported by the fact that patients derive no benefit whatever from treatment restricted only to the larynx until attention is given also to the nasopharyngeal surfaces. Hygiene of these parts is considered a *sine qua non* of success in a majority of cases. The same is true of concomitant disorders of other organs.

In some instances the laryngeal inflammatory process is sustained by disorders of the gastric, hepatic, and renal systems, all of which require close scrutiny. The underlying cause must be removed or alleviated.

Attacks of hoarseness in professional vocalists are often only exacerbations of chronic laryngitis, a deficiency of lubrication of the vocal bands being the main local factor. This condition is successfully combated by the administration of 5 grs. (0.32 gm.) of ammonium chloride, which, taken during intermissions of a theatrical performance, in many instances is of benefit. Rigid measures must be carried out to prevent attacks.

In singers cocaine and the suprarenal preparations should not be applied to the larynx. They are goading spurs to tired nerves and muscles. Electricity and strychnine, except late in the treatment, are also contraindicated. Voice hygiene, including the correction of errors of voice production and the proper training of singers, is of prime importance. A warm, even climate is desirable. Local treatment to the larynx in the form of sprays, intratracheal injections, and topical applications is not materially different from that of acute laryngitis. Galvanism and mild massage to the external muscles of the neck have only a psychic value. Simple astringents should be relied upon to check the serous inflammation and remove its effects, preference being given to alum and zinc chloride, the former in an atomized 2 or 3 per cent solution, the latter in a 1 or 2 per cent solution used as a spray or by topical application.

Complete voice rest is important in the treatment of diseases of the upper air passages in singers and professional voice users. Singers do not tolerate severe measures, the utmost gentleness, with as little manipulation as possible, being required.

Mild cases, especially those in which there is infraglottic involvement, are greatly benefited by sodium benzoate. Exacerbations are sometimes quickly stopped with 5 gr. (0.3 gm.) doses administered every 3 hours, in addition to the local measures recommended.

Potassium iodide, 5 grs. (0.3 gm.) four times a day, is advised, even a greater dosage being indicated in the more infiltrative types.

When laryngitis is aggravated by gastric, hepatic, or intestinal disorders, especially in drinkers and smokers, attention to these conditions should, of course, form an important part of the régime. In patients who smoke continuously, the congestion is often maintained simply by the irritating action of the smoke-contaminated air. Sitting in a smoking-car or in a room in which others are smoking is, therefore, as bad as if the patient himself were smoking.

In dry laryngitis (laryngitis sicca), attention to the nasopharyngeal disorder forms an important part of the treatment. Detergent and disinfecting sprays are of value, but must be employed over a considerable length of time. Pachydermia laryngis is treated with chromic, lactic, or trichloracetic acid topically applied to the affected areas. When singer's nodes are large enough to cause discomfort, they should be removed surgically under direct laryngoscopy. When a gouty or rheumatic diathesis can be traced, sodium salicylate and alkalis are indicated.

LARYNGEAL TUBERCULOSIS

Laryngeal tuberculosis is an infectious and contagious disease of the larynx, caused by tubercle bacilli, and is usually secondary to pulmonary tuberculosis (laryngopulmonary tuberculosis). It is very rarely primary, and is usually indolent from the beginning. The disease is characterized by infiltration, and by the formation of tubercles, granulomata, and ulcers in the walls of the larynx, followed later, in many instances, by edema, fibrosis, perichondritis, and even necrosis.

Tuberculosis attacks the larynx in both sexes. A tuberculous involvement of the larynx is most frequently met with between the ages of 20 and 40. Rarely have cases been observed in children less than one year of age.

PATHOLOGY: Tuberculosis of the larynx is similar histopathologically to tuberculosis of other organs, being modified by the morphologic characteristics of the organ and its functional activities. Infiltration, ulceration, tumor, and miliary tubercles occur separately or in combination. Histologically the disease is characterized by the early formation of subepithelial miliary tubercles, surrounded by a zone of inflammatory reaction, which zone has different anatomic characteristics according to the type of tissue affected. Tubercles are found in the infiltrated thickened mucosa and submucosa near the glands. And among the blood vessels the reticular tissue with small round cells in great abundance involves the surrounding parts in all directions by growth and extension through all possible pathways.

The various phases of inflammation, viz., productive, exudative, necrotic, and reparative, appear, separately or simultaneously, and in all possible sequences, with a preponderance of one particular pathologic state in any one combination. The following pathologic changes can exist alone or in combination:

1. Vascular changes which are purely reactive from the effort of coughing, or inflammatory in character: (a) anemia or mucosal pallor, most generally accepted as a part of the general anemia and debility of the patient; (b) hyperemia or injection of the mucous membrane, especially as an early sign in the interarytenoid sulcus.

2. Infiltration of a subepithelial character in which one or all parts of the larynx become

involved. It manifests itself by a thickened mucosa and at times reaches enormous proportions.

3. Ulceration, taking place as soon as the tubercles break down and the superficial epithelium becomes denuded. The ulcerations are often minute, but may be larger, they are gray and crater-like and have superficial irregular edges. The types which are found are described as (a) acute or active; (b) chronic or sluggish; (c) superficial with infiltration; (d) deep with infiltration; or (e) superficial and deep with infiltration.

4. Tuberculoma, manifesting itself as a single tumor or granulation tissue. Papillary-like hyperplasia is identical with infiltration except that the process is more circumscribed and less edematous. It need not appear on the site of an ulceration.

5. Edema of the infiltrative, avascular type. It assumes a typical ashen-gray pallor.

6. Perichondritis, and subsequent destruction of the cartilaginous substance, occurs readily, because involvement of the mucoperichondrium interferes with the nutrition of poorly supplied cartilage.

7. Abscess formation beneath the perichondrium.

8. Necrosis, periostitis and osteomyelitis.

9. Fibrosis and calcification—the reparative tendency of the specific process.

SYMPTOMATOLOGY: There is complete absence of subjective symptoms in early or mild cases, hence the importance of a laryngoscopic examination in every case of suspected pulmonary tuberculosis. Periodic inspections in all chronic cases are also important for the detection of early laryngeal complications. Were all the latter systematically examined by laryngoscopy, lesions so situated as to preclude any subjective laryngeal symptoms would be found in many instances.

Cough due to laryngeal tuberculosis is not an important early symptom. In any event, it is difficult to determine the early role of the larynx in a phthiscal cough. It is established that the posterior laryngeal wall and the interarytenoid sulcus are highly sensitive areas, so that irritants or secretions, either from above or below, may excite spasmodic cough of a paroxysmal and explosive nature.

Painful swallowing (odynophagia) is manifested by a burning sensation which is usually deep-seated and excruciating, even in the absence of ulceration. It is due to perichondritis, infiltration of muscles, necrosis, or neuritis of the nerve ending in the mucosa overlying the arytenoid cartilages. Difficulty in swallowing (dysphagia) is common in the presence of marked ulceration and infiltration, especially of the epiglottis or aryepiglottic folds. Pain at mealtime is a late and annoying symptom when the larynx becomes more extensively involved, patients preferring not to take food. Coughing or regurgitation of foods through the nose as the result of pain occurs in aryepiglottic and epiglottic involvement. Such pain is local, or referred to the ear by way of the glossopharyngeal to Jacobson's nerve of the tympanic plexus in the middle ear.

Distress on swallowing becomes so great as to cause the patient to reduce the amount of food intake to avoid pain; the taking of food often becomes a source of dread to the patient. When the importance of maintaining the nutritional balance of a tuberculous individual is considered, dysphagia and odynophagia are symptoms that are serious and difficult to relieve.

The voice disturbance may be dysphonia or may range from amblyphonia (voice weakness) to total aphonia. Unfortunately the larynx ordinarily receives but little attention until there is marked hoarseness or local pain. It is a mistake to assume until that hoarseness in pathognomonic of laryngeal tuberculosis. Paresthesias or subjective sensations in the larynx are common as feelings of pressure. scratching, tickling, sticking, dryness, and rasping.

Although at first the voice is unaltered, in the course of the disease there is progressive impairment. Hoarseness may be present upon arising or after a paroxysm of coughing, or it may appear after an effort at speaking. The degree of alteration of the voice does not parallel the severity of the disease, but depends upon the degree of involvement of the phonatory apparatus. Subjectively, there is a feeling of dryness and local heat, slight tickling or burning in the throat, and distinct fulness. It becomes an effort to speak—due to vocal fatigue—with a voice which is weak, dull, muffled, and roughened. Such a voice results from simple infiltration of the muscles or mechanical interference with vocal cord movement or approximation due to ulcers, swellings, and disease of the nerves, muscles, or arytenoid joints.

GENERAL SYMPTOMS: General symptoms of

laryngeal tuberculosis are not always proportionate to the laryngeal lesion, and, with the exception of dysphagia, are due more to pulmonary than to the laryngeal infection. The general health may continue to be good until swallowing becomes impaired. It is rare, however, for tuberculosis to invade the larynx without being preceded or accompanied by some general symptoms, such as fatigue, excessive secretions, gastric disturbances, phobias, progressive wasting, tachycardia, and such definite signs as rise of temperature in connection with a history of hemoptysis or pleurisy. In the late stages the lungs pour into the already diseased larynx such quantities of irritant secretions that the cough becomes almost incessant, rendering the condition intolerable. The inflamed laryngeal mucosa excretes considerable mucus, but not sufficient to occasion any particular distress in its expulsion unless there is simultaneously a discharge from the lungs.

Since laryngeal tuberculosis is usually secondary to lung involvement, any consideration of the local process as above must necessarily include with it the symptoms of pulmonary tuberculosis in its various phases. Laryngeal tuberculosis causes considerable fever at times, as is shown by a greater divergence in the daily range, this probably being coincident with necrosis and caseation of new areas or extension of old lesions.

OBJECTIVE SYMPTOMS: The lesion produced by tuberculosis in the larynx varies according to its location, extent, duration. and pathologic reactive intensity. Four stages are distinct, occurring singly or concomitantly; (1) exudation and infiltration (deposit and serous inflammation); (2) ulceration and/or proliferation; (3) perichondritis or necrosis; and (4) tumor formation (tuberculoma).

Anatomically, it is of the utmost importance to locate the lesion, or lesions, by designating the involvement of the cords, arytenoids epiglottis, etc., because the differences in liability to infection of different parts of the larynx have diagnostic as well as prognostic significance. The posterior half of the larynx is the part earliest and most frequently affected. The following localizations will be considered separately, in the order of frequency of involvement: interarytenoid sulcus and posterior wall; arytenoids and aryepiglottic folds; vocal cords; epiglottis; ventricular bands; laryngeal ventricle; subglottis; and trachea.

PROGNOSIS: Advances made in laryngologic diagnosis and surgery have improved the prognosis of laryngeal tuberculosis. The nature of the disease is such that in its early recognition and localization we have our best weapons of combat. That is why the study of laryngeal pictures is stressed in all cases of pulmonary tuberculosis. It would be difficult to name another disease in which so many different factors are involved in the prognosis as in laryngeal tuberculosis.

Statistics relative to the incidence of laryngeal tuberculosis are often dependent upon laryngologists and internists who are by no means uniform in their interpretation of the types of patients of pulmonary involvement. Reports to the contrary notwithstanding, a tendency toward spontaneous healing of laryngeal tuberculosis is slight. A stationary or healing stage of disease process in the lung to a certain extent has a favorable effect on the laryngeal process. The state of the larynx, however, does not progress or recede in direct relation to the changes in the lung. The laryngeal disease may get worse when the pulmonary process remains stationary, or even improves. The prognosis depends on the type, situation, extent, depth, age, and progress of the local lesion, and is further to be determined by an estimate of the pulmonary lesion (virulence, extent, duration, and progress) and of the general resistance of the individual patient.

The value of the laryngeal picture as a prognostic sign can perhaps be best judged by statistical studies, which indicate that the frequency of the disease (tuberculosis) varies with the type of pulmonary infection, and that the laryngeal process depends upon the progress of the pulmonary process. In other words, the lungs are the chief consideration in the prognosis. Not that patients with advanced pulmonary tuberculosis cannot have a laryngeal process arrested or healed—or vice versa —for there are always exceptions to any rule. The fact that occasionally a patient gets well without treatment is no logical argument against local therapy. An advanced condition of the lung is no reason for failure to apply local treatment. Laryngeal tuberculosis is best controlled in the slightly and moderately advanced cases, but the severe cases too should be aided by endolaryngeal methods. Healing in these cases depends mainly on the prevention of reinfection by protecting the patient against new contacts and recurrences. The prognosis is naturally bad if both the primary and secondary foci are far advanced, but so much the better if the lung involvement is mild and the laryngeal process still localized. Fever, long continued lack of appetite through disease, and pain, render the prognosis doubtful.

Life expectancy in pulmonary tuberculosis without laryngeal involvement is about 60 per cent, whereas when accompanied by laryngeal involvement, it is reduced to approximately 30 per cent. The expectancy naturally decreases with the advance of pulmonary pathology. The prognosis in far advanced pulmonary tuberculosis is about two and one-half times less favorable in cases in which the larynx is involved slightly than when this organ is not at all affected.

DIAGNOSIS: A thorough and comprehensive study of the following data is essential for a proper diagnosis: (1) local history, (2) objective laryngeal findings, keeping in mind the need for accurate, laryngoscopic interpretation of the various forms of tuberculosis either by direct or indirect laryngoscopy and by roentgenograms, (3) pulmonary history and findings, (4) repeated examinations, and (5) biopsy.

DIFFERENTIAL DIAGNOSIS: All chronic diseases of the larynx, especially those causing hoarseness and pain, must be considered. It should be remembered that nonspecific infections may be superimposed upon a tuberculous process in combination, or as a separate entity. It is also possible that the same may be true of specific diseases, such as syphilis and carcinoma. Chronic nonspecific forms, other specific conditions, neoplastic disease and paralysis must be considered.

TREATMENT: It is of paramount importance to bear in mind that we are concerned with a tuberculous patient who has a complicating or secondary tuberculosis of the larynx. The patient's vital resources must be strengthened, local therapy being subordinated to general therapy.

There has been a laxness in the treatment of this affection, first, because of insufficient knowledge, and second, because of a pessimistic attitude toward this form of tuberculosis. Despite modern methods and institutions well organized for the treatment of the disease, there is a decided tendency on the part of the medical profession to view the problem with indifference. Careful check of all pulmonary cases is important and requires frequent laryngoscopic observations. These are not necessarily institutional problems, although therapy can be carried out best in institutions under close specialistic supervision. Laryngeal tuberculosis is highly infectious and requires isolation under an intelligent but strict discipline, so that one can guage the temperament as well as the vitality of the patients. We do not stress the well known facts that sanatoria located in protected dust free areas, whose climate is not too dry, are the ideal places for therapy, because the monetary and social status of many patients makes such a choice impossible. It is relatively easier for an institutionalized patient to coöperate with the physician and to acquire stoicism than it is for one who remains at home confronted with his own problems and those of his family. Nevertheless, non-institutional treatment must be available, in spite of its inescapable handicaps.

PROPHYLAXIS: Inasmuch as this form of laryngeal disease occurs frequently in phthisical patients, prophylaxis is emphasized in the routine management of tuberculosis. The more one deals with this very common specific disease of the larynx, the greater one's conviction becomes that the preventive idea should prevail according to the following conditions:

1. A high standard of the patient's physical and mental status must be maintained.

2. The larynx must be examined frequently in all cases of tuberculosis, as much depends upon early recognition of the local pathologic process. Attention must be directed to the minor laryngeal complaints before they attain major proportions.

3. Local areas when non-tuberculous must be treated to prevent the resistance of the parts from becoming lowered. Chronic laryngitis must be treated and abrasions and superficial ulceration watched.

4. Voice hygiene or absolute vocal rest is important. Proper use of the voice is to be emphasized as the larynx is already subjected to abuse by coughing.

5. The so-called "common cold" should be watched and proper treatment instituted promptly.

In the management of a laryngeal case the following objectives are sought:

1. To relieve symptoms which not only interfere with comfort but defeat one of the

main objectives in the general treatment, namely nutrition.

2. To obtain complete arrest of the tuberculous infection, pulmonary and laryngeal.

3. To cure the process in the larynx, preserving, if possible, laryngeal function.

GENERAL OR SYMPTOMATIC TREATMENT: All measures should be instituted that are essential for the management of pulmonary tuberculosis. Improvement attends the sojourn in a locale where the climate is mild and warm. Attention to general health by suitable dietetic means, outdoor life and the judicious use of local therapy, can also favorably influence the pulmonary disease.

Vocal hygiene or rest of the voice is important. When the larynx is attacked by tuberculosis an important function is disturbed. The main factor in facilitating healing of that organ is absolute and complete rest of the voice. In the beginning of the disease restrictions should be placed even on whispering, as any movement traumatizes the vocal cords and the posterior wall of the larynx. The confidence and full coöperation of the patient are essential. It is explained to him that healing in any part of the body is obtained by putting the part at rest and this applies equally to the larynx. He is cautioned that even a whispered remark means abuse and is an effort that should not be made. A pad of paper and pencil are advised to be held in readiness.

LOCAL TREATMENT: Cleansing hygiene, control of pain, destruction of localized lesions and stimulation of fibrosis by topical therapy.

1. Drugs: Intralaryngeal instillations or sprays of chaulmoogra oil, pontocain, butyn orthoform emulsion, codliver and mentholated oils, topical applications for formalin and lactic acid; insufflation of powders, such as orthoform, pyoktanin (methyl violet), iodoform, anesthesin and zinc stearate; inhalations of vapors of tincture of benzoin, menthol, creosote or guaiacol; and lozenges of orthoform, anesthesin or euphagin.

II. Heliotherapy and radiotherapy in the form of the Finsen light; carbon arc light; direct reflected sunlight; ultraviolet radiation; roentgen ray and radium therapy.

III. Cauterization may be of considerable value and is utilized as thermo- or electrocauterization by the galvanocautery or by surgical diathermy. Chemical cauterization is carried out with trichloracetic acid, quinine hydrochloride (neutral), formol, lactic acid, silver nitrate, paramon of phenol or formaldehyde.

IV. Surgical, endolaryngeal and extralaryngeal procedures include curettage and scarification, endoscopic removal of granulomas, tracheotomy, plastic repair for stenosis, epiglottidectomy, superior laryngeal nerve blocking or resection, thyrotomy, laryngotomy, and rarely hemilaryngectomy and laryngectomy.

V. General surgical procedures are indirectly related. Collapse therapy, provided infiltrated or ulcerated areas do not interfere with the nutrition of the patient, often produces a favorable effect on the larynx. Control of the primary tuberculous process in the lung permits the vital forces concerned with "resistance" to concentrate on the local nidus of disease and in some instances may overcome the infecting agent or focus. Any procedure directed at lessening the quantity of secretions which pass through the glottis will relieve the larynx considerably and aid in the process of healing.

Gastrostomy must be performed early enough before vital forces are so far reduced that recovery becomes impossible. It rests the larynx and relieves dysphagia and odynophagia, rendering life tolerable and maintaining the proper nourishment.

LARYNGEAL SYPHILIS

Primary syphilis of the larynx is seldom encountered since the larynx is scarcely accessible to direct infection. When recognized as such, it is assumed that the affection probably extended from the pharynx where primary infection is not rare. On the other hand, secondary and tertiary syphilitic lesions apparently have a predilection for localization in the larynx, the secondary being much more frequent than the tertiary lesions. The individuals of adolescent and middle age groups are the ones mostly exposed to this disease. The secondary stage appears in most instances 2 to 3 months following the initial infection, although the characteristic laryngeal changes appear 6 months to 3 years, rarely later, after the initial lesion. The symptoms of the tertiary type, however, occur only many years after the primary infection.

Tertiary forms of syphilis occur in the larynx as (1) circumscribed nodular gumma; (2) diffuse gummatous infiltrations; (3) gummatous ulcerations; (4) perichondritis; (5) granuloma or syphiloma (hyperplastic neoplasm); (6) chronic hypertrophy (indurated form); (7) cicatricial scarring (stellate) with deformity; and (8) vocal cord dysfunction (articular fixation, peripheral or central neurogenic paralysis and myopathies). The infiltrative process becomes a perichondritis when it invades the cartilage. The infiltrate has a predilection for areas exposed to friction and to the action of the excreted material. Parts affected by infiltrations exhibit a smooth uniform thickening and never lead to a pronounced deformity. In the nodular form a smooth round, dark mass presents itself.

Since the infiltration can affect a greater part of the larynx, and because of a tendency of the tissue to disintegrate, extensive ulceration occasionally results. When the infiltration occurs in a more circumscribed form, it forms a tumor-like protrusion, i.e., a syphiloma. Such a gummatous infiltrate varies from the size of a pea to that of a walnut, and occurs either singly or multiple. These excrescences show a preference for those areas of the larynx which have richly vascular submucous connective tissue.

In deep syphilitic ulcers scar formation characteristically follows the healing process. This takes place even after proper medication, the suppurative process ceasing and the peripheral part of the ulcer being transformed into fibrous tissue (scar) which is then drawn toward the center. Stenosis is not uncommon as the result of this traction, especially in extensive defects in the soft parts of the larynx, but is most frequent after the destruction of cartilage. Such scars have a tendinous, shiny appearance and are bridge-shaped and ray-like (stellate-scarring). In addition to destruction of parts, these scars are drawn into bizarre arrangements. The cords are often untied by cicatricial bands and the subglottic area narrowed by the contracture. Sometimes after the healing of syphilitic ulcers, the whole mucosa of the interior of the larynx is transformed into the previously mentioned tendinous, fibrous tissue. Such sequelae are regarded as typical of the healing processes of diffuse syphilitic infiltrations.

SYMPTOMS: The subjective symptoms accompanying syphilis of the larynx can be looked upon as reflecting the various objective findings. They are not, however, always in direct proportion to the severity of the signs. Serous or catarrhal inflammation accompanying syphilis does not differ in its symptoms from those of a simple chronic laryngitis; it is, however, more persistent and disappears only after antisyphilitic treatment. Subjective symptoms resulting from papules and from the ulcers which follow depend upon their location. Papules on the epiglottis often do not produce any symptoms at all, unless it be slight difficulty in swallowing. On the vocal cords, especially on their free borders, papules cause hoarseness and in the more severe cases partial or total aphonia. After appropriate treatment, the papules or condylomata disappear and the process clears up. Pain is never caused by papules per se but may occur with infiltrative lesions.

There are no subjective symptoms accompanying syphilitic infiltrations unless the vocal cords themselves are affected. The voice suffers according to the degree of involvement. Infiltration of the epiglottis makes swallowing somewhat difficult. Respiration is embarrassed when the infiltration is subcordal (laryngitis subglottica). Swellings which develop rapidly produce respiratory difficulties much sooner than the infiltrations which are slow in form- much annoyance.

ing, a very high degree being reached without

Gummata also present symptoms of varying severity. Sometimes they develop without subjective symptoms, but even if they are present they affect neither respiration nor the voice. This is the case until the sudden appearance of dyspnea or hoarseness compels the patient to be examined laryngoscopically, when the gummata which have developed ulcerative changes or formed abscesses will be found.

Destruction by gummata may progress within a short time to a point at which satisfactory resolution is no longer possible but, after antiluetic treatment is begun, the process heals by scar formation. With the tendency to cicatrization, diminution of the laryngeal lumen frequently is so severe as to cause respiratory difficulty.

DIAGNOSIS: The diagnosis of syphilis of the larynx is based mainly upon the laryngoscopic picture, a history of syphilitic infection, and the presence of lesions elsewhere in the body, supported by laboratory evidence. The body lesions have only a relative significance, the most important factor being the laryngoscopic picture. Owing to the variety of syphilitic laryngeal involvement and the clinical pictures, many difficulties are encountered in reaching a diagnosis. A differential diagnostic problem is presented by all cases of chronic laryngitis. A laryngoscopic diagnosis of syphilitic laryngitis is possible only after all other causes of chronic laryngitis have been eliminated. Therefore, all possible factors must be considered in working out a differential diagnosis. This holds as true for laryngeal syphilis as for all other forms of chronic laryngitis. Age, blood findings, loss of weight, the general symptomatology, as well as the local picture, are frequently so varied as to be misleading, rendering the method of elimination perhaps the safest for arriving at a correct diagnosis.

In addition, it is possible for various etiologic factors to coexist, which naturally increase the diagnostic difficulty. It is not beyond possibility for a patient with pulmonary tuberculosis to be suffering from syphilis and even carcinoma of the larynx. Very commonly a syphilitic patient is found with a marked nasal and nasopharyngeal disease which has led to secondary laryngitis.

TREATMENT: Treatment of laryngeal syphilis must be general but also local. Only in cases in which a severe complication is threatening, e.g., in which perichondritis or edema causes dyspnea of high degree, or stenosis of the larynx appears after subsidence of the syphilitic process, must intubation or tracheotomy be immediately instituted. Large syphilomas are to be removed surgically when they become obstructive and interfere with respiration or phonation.

TUMORS OF THE LARYNX

Any long continued irritation as the result of disease of the upper and lower respiratory tract as well as chronic laryngitis with all of its causative factors may play a role in the development of a neoplastic response of this area. In addition to these, there is the physiologic factor involved, perhaps associated with the activity of this organ, which is seldom or never at complete rest. Tumors are seen most often in the male, who subjects his larynx to greater abuse than does the female.

SYMPTOMS: The location of a laryngeal tumor, its size and its nature, have considerable influence upon the symptomatology. A growth situated anteriorly in the anterior commissure may, though small, so prevent approximation of the cords as to cause complete loss of voice (aphonia); on the other hand, a large, soft growth located below the cords may not interfere with adduction and only give rise to the symptoms of chronic irritation. Paroxysmal hoarseness is often observed in such cases, especially after loud talking. A small tumor situated above the cords may give rise to very little trouble and cause no subjective symptoms. In the great majority of cases, however, persistent hoarseness is the first manifestation.

BENIGN TUMORS: Benigh tumors usually develop slowly and do not infiltrate. Dyspnea comes on late, except when an acute "cold" or local inflammation produces additional though temporary infiltration of the tissues, when dangerous symptoms suddenly supervene. Common benign tumors of the larynx are papillomas, mucous polyps, fibromas, mixed tumors (myxofibroma and angiofibroma), cysts and vocal nodules.

SINGER'S NODES: (Chorditis nodosa): These small growths usually observed on the superior surface of the cords, or near their edge at the junction of the anterior and middle third, are the result of improper or excessive use of the voice. While the "singer's nodule" usually occurs in singers and public speakers, it may appear in any individual who habitually abuses the voice.

PAPILLOMA: This, the most frequent variety of benign growths, is very commonly met with in children. It may occur as a single tumor but is usually multiple (especially in children), varying in size, shape and location. The seat of predilection is the vocal cord, next the ventricular band, but it may be found in any other part of the larynx above or below the glottis.

FIBROMA: Fibromata are similar to polyps, though they are more opaque and are resistant to pressure. They are smooth, sessile or pedunculated and may be white, gray or reddish, the latter color being due to extravasation of blood brought about by coughing and clearing the throat. They are generally found near the anterior commissure on the cords, below or upon the ventricular bands. They sometimes become sufficiently large to fill the larynx and produce respiratory embarrassment.

CYSTS: Cysts of the larynx consist of four types: embryonal or congenital, retention, lymph or blood, and traumatic (implantation). The great majority are retention cysts formed by the closing off of a duct of a gland as the result of some inflammatory process. Most of them occur in the region of the epiglottis.

The other varieties of benign growths occasionally met with in the larynx are angioma (lymph and hemangioma) chondroma, adenoma, lipoma, myxoma, amyloid and thyroid gland tumors.

TREATMENT: Treatment of singer's nodes consists of rest as the first requisite, with talking to be avoided as much as possible. Errors in phonation should be promptly corrected. Local applications of astringent solutions are useless, while the careful topical application of chromic acid or galvanocauterization is sometimes of value. For the eradication of large growths, ablation with laryngeal forceps affords satisfactory results.

All other benign growths should be removed. In the case of small sessile growths this is sometimes accomplished by chromic acid, the cutting current, or the galvanocautery. As soon as a neoplasm becomes larger than a split pea, removal with laryngeal forceps is preferable. This may be accomplished with local analgesia under indirect laryngoscopy, suspension laryngoscopy or direct laryngoscopy. Tracheotomy suddenly may become necessary under local analgesia when the growths are large and no time is available for their surgical removal. Benign tumors do not recur as a general rule; when they do, it is not necessarily in the same area. In cases of multiple papillomata of the larynx, removal generally is followed by recurrence. In addition to the excision, radium is often used to good advantage as a supplement, its application being aided perhaps by a preliminary laryngofissure. Some authors claim radium is contraindicated because of its early stimulating effort. Tracheotomy often has a curative effect entirely empirical, for the papillomata not uncommonly disappear sometime later.

Cysts of the larynx may be temporarily evacuated and reduced by ignipuncture. Permanent removal is accomplished through the mouth by snare, followed by cauterization of the base, or, if the growth is very large, by external operation. Under suspension, indirect or direct laryngoscopy or by means of lateral pharyngotomy, ablation of the cyst and its walls is performed with punch forceps.

MALIGNANT TUMORS: The proportion of malignant to benign tumors of the larynx, as shown by statistics, is about 1 to 7, but the fact that the former are more likely to be reported than the latter suggests that this proportion is inexact. One malignant case in 20 would, judging from the average laryngologist's experience, probably be nearer the actual ratio. About 95 per cent originate in the stratified squamous mucous membrane, giving rise to squamous cell carcinoma.

CARCINOMA: Laryngeal cancer is more frequently observed in men than women (10 to 1), and, as is the case with this type of growth in so many other parts of the body, about 68 per cent are observed in subjects between the fortieth and sixtieth years.

The lymphatic drainage of the larynx bears close anatomic scrutiny. The anatomy is responsible for the classification of laryngeal new growths as intrinsic when they are situated on or below the true cords, and as extrinsic when the growths are situated above this level (false cords), arytenoids, aryepiglottic folds, or pyriform sinuses).

PATHOLOGY: Cancer of the larynx appears usually as a primary growth originating in the organ itself. Occasionally, it is secondary to a neighboring malignant neoplasm. Histologically the majority of the tumors are carcinomas of the scirrhus or hornified squamous cell type, particularly because of the high frequency with which they originate from the true cord; seldom is the less mature of anaplastic type encountered.

SYMPTOMS: Hoarseness is one of the first objective symptoms of laryngeal carcinoma, and its presence would suggest the advisability of laryngoscopy for a differential diagnosis. This is especially important since the prognosis is relatively good when a neoplasm is still small and limited to one cord. The hoarseness in these cases is pronounced, persistent and progressive. Pain and difficulty in swallowing and breathing are relatively late symptoms. These depend on the site and the size of the tumor.

DIAGNOSIS: Even with properly carried out laryngoscopy doubt occasionally arises whether one is confronted with a malignant or with a benign growth. As benign structures too must be removed, excision should be thorough, particularly in depth. The excised neoplasm should be subjected to careful and, in questionable cases, to serial microscopic examination. Both syphilis and tuberculosis may affect the larynx and simulate cancer, or vice versa. In the elimination of syphilis, serologic tests are of importance, while the physical and roentgenologic examination of the lungs and repeated microscopic examination of the sputum aid in recognizing tuberculosis lesions.

BIOPSY: Much valuable information is attainable by histopathologic examination; biopsy is of the utmost value, provided the tissue for examination is removed from a malignant area. The numerical increase of skilled laryngologists has facilitated earlier and somewhat easier accessibility to the larynx for the removal of tissue for microscopic study.

Treatment: In the management of the intrinsic type of laryngeal malignancy, electrosurgery is a powerful weapon, provided the growth is so destroyed at a farily early stage. Intralaryngeal procedures of any kind except in the very incipient stage are rejected because they are ineffective, and therefore dangerous. For any operable malignant growth radical surgery is the only justifiable measure. Laryngofissure preliminary to the removal of the cord, electrodissection or electrocoagulation have proved satisfactory at least in selected cases of early lesions of the anterior two-thirds of the cord. The chances for recovery are absolutely nil when at an early stage thorough removal of the growth cannot be carried out. When such a procedure can be carried out satisfactorily, the prognosis becomes relatively favorable.

The safest rule for the management of laryngeal carcinoma is surgical intervention whenever the case is seen near its incipiency, and nonsurgical if seen in an advanced stage. If, on careful examination, there appears to be no peripheral extension, and the growth is so situated that it can be, so to speak, punched out with considerable surrounding tissue by special cutting forceps, this may be resorted to under direct laryngoscopy or by laryngofissure. An ulceration or thickening near or at the edge of a cord may thus be removed. Unfortunately such cases are comparatively rare, the laryngologist usually being consulted when the process has already advanced too far for this comparatively simple procedure. Complete extirpation of the larynx then is the only procedure capable of affording some chance of recovery. Laryngectomy is now advocated by most experienced laryngologists when the limits of the false cords are not passed, that is, when only the tissues of the true cord proper are involved and when there is no lymph node involvement. All the factors contributing to more certain diagnosis, proper interpretation of the operative risk and to improved operative technic have enhanced the success of this operation.

Paralysis of the Vocal Cords

Paralysis of the larynx may be the result of "functional" or "organic" processes. These basic processes may coexist, the one favoring the other. Inasmuch as there are a number of groups of antagonistic muscles, each of which functions in all motor reactions, and as there are a host of etiologic factors involved in their dysfunction, one has to deal with a number of debatable clinical entities. Objective symptoms most commonly are represented by various degrees of phonatory loss. Next in frequency are those symptoms characterized by the production of abnormal sounds (laryngeal stridor) and difficulty in breathing.

Functional: This type is due usually to some emotional conflict of which the patient may or may not be aware, and is more commonly manifested as a paralysis of the adductors, i.e., paralysis of the muscles that close the glottis, so that the cords are observed as being separated during attempts at phonation; they are unable to meet in the midline, the disturbance being always bilateral. Varieties observed are: paralysis of the adductors or later cricoarytenoids, paralysis of the internal tensors or internal thyroarytenoids, and paralysis of the interarytenoid muscles.

Organic: This type is due to some discernible lesion and is thought to begin with paralysis of the abductors; i.e., paralysis of the muscles that open the glottis, but may later also affect the adductors. One or both cords may be involved. The paralysis may be neurogenic (central or peripheral) or myogenic.

According to some, the laryngeal lesions fall into four clinical groups; neuropathic, encephalopathic, myopathic and a combination of the neuropathic and myopathic types. When the paralysis is neurogenic, there is absence of allocal pathologic process. The myogenic form is characterized by the presence of some lesion locally, e.g., tumor, ulceration and the like.

Unilateral Recurrent or Inferior Laryngeal Nerve Paralysis: The vocal cords being separated or abducted by the posterior cricoarytenoid muscles, paralysis of one of the latter results in a state of adduction of the corresponding cord, i.e., the vocal cord is in the midline or slightly lateral to it, while the other cord acts normally. The irregular, triangular space forming the glottic aperture is sufficient for normal breathing in the majority of cases, dyspnea being ordinarily complained of only under great exertion. The voice is seldom impaired.

The Sulfonamides

OSCAR W. BETHEA, M.D.
Professor of Clinical Medicine, Tulane University
NEW ORLEANS, LA.

THE DEVELOPMENT of the sulfonamides has been the most dramatic event in medical history. The acceptance of other great advancements like antisepsis, anesthesia, and the use of cinchona in the treatment of malaria, was gradual and any large benefit to humanity came only after long decades of struggle. The sulfonamides have been developed, accepted and applied in the treatment of millions of people suffering from innumerable diseases, all within the space of a few brief years[1]. It is probable that more articles have been written on this group of drugs than on any other one medical subject in the same length of time, enough to constitute a fair-sized library. Everyone is so familiar with this literature that it seems advisable here to touch upon only a few of the most interesting phases of the development and use of these remedies.

The first one of these compounds was synthetized by Gelmo, a German chemist, in 1908 and was extensively employed in the dye industry in the form of azo compounds. In 1932, some research workers in a German commercial house prepared sulfamido-chrysoidine and patented it under the name of prontosil. Its value as a chemotherapeutic agent was studied and the first report released in 1935. This work was promptly investigated at the Pasteur Institute in Paris and it was demonstrated that it was the sulfanilamide fraction of the compound that made it effective. The drug was put on the market in France under the name of rubiazol and was not patented. In June, 1936, the first report of the English investigators was published[2]. In November of the same year, Long and Bliss[3] presented their classical study before the Southern Medical Association. A world-wide search promptly developed with the objective of preparing safer and more efficient compounds. In 1938, Whitby in England synthetized sulfapyridine and it was proved to have many advantages over sulfanilamide, especially in the treatment of pneumococcal infections. The same year sulfathiazole was prepared in Sweden and in the following year was produced and extensively studied in other countries. In 1940, Roblin and his colleagues announced the synthesis of sulfadiazine. In the same year Marshall and his associates developed sulfaguanidine. Sulfamethylthiazole had been developed but was withdrawn from the market largely on account of its high toxic index. Numerous other preparations of the sulfonamide group have been developed, but their place in medicine has not been established.

The first four members of this group are the ones that have been extensively studied and universally accepted as having proved therapeutic efficiency.

Sulfanilamide was introduced originally for staphylococcal infections. Its efficacy for this group of conditions was soon demonstrated to be negligible, but its marked value for certain streptococcal infections was proved. As is usually the case, there was a wave of overenthusiasm and many extravagant claims were made relative to its specific action in a multitude of diseases; for example, that it would reduce the mortality of pneumonia' to six per cent and was specific for rheumatic fever. Sulfanilamide is now used almost exclusively for certain streptococcal infections such as erysipelas[4] and scarlatina[5]. Many predict that it will probably give way entirely to the newer and safer related remedies[6].

Sulfapyridine was developed in an effort to find a more efficient remedy for pneumonia. Its value in this disease is unquestionable. To those of us who had been accustomed to watching our patients grow sicker and sicker for seven or eight days, it seems little short of a miracle to have them clinically well in 24 to 48 hours. In spite of the later remedies, it is still extensively used in pneumococcal infections, also in meningitis, subacute bacterial endocarditis, bacillary dysentery and numerous other diseases.

Sulfathiazole was demonstrated promptly to have many advantages over the preceding agents. It was less toxic, and at least equally efficacious in pneumonia, meningitis[7] and many other conditions. In urinary tract infections it is markedly superior for practically all types except Escherichia coli.

Sulfadiazine, the fourth and last of the group of generally accepted sulfonamides, has been proved to be the least toxic and for pneumonia and many other infectious processes, equally efficient. In urinary tract infections it is also effective for the Escherichia coli[8]. Sulfadiazine lowers temperature more rapidly than sulfathiazole, probably not as rapidly as sulfapyridine. It is less rapidly absorbed from the intestinal tract. There is less tendency for the development of crystals in the urine. Studies indicate that there is less acetylization than in the case of sulfathiazole by about fifty per cent; and that from corresponding dosage the blood level is higher and more sustained.

Toxic manifestations from the sulfonamides are all too frequent, but the exercise of sufficient care may reduce their incidence and severity. In the first place, it is probable that sufficient care is not exercised in the selection of cases for this type of chemotherapy.

Among the contraindications that should be considered are: a history of previous toxic reactions, evidence of kidney or liver damage, severe anemia, marked reduction in leucocytes, old age, debility, and advanced malnutrition. Not that all of these conditions absolutely contraindicate the sulfonamides, but they do demand conservatism and careful observation.

These agents should be employed only when the patient is under careful observation and, if full dosage is to be administered, it is much more satisfactory to have the patient in a hospital. In any event, a complete blood picture and urine study should be made at least every two days. It was early demonstrated that when sulfanilamide is prescribed alkalis should be given, sodium bicarbonate being the one usually employed. Many consider alkalis as indicated with other members of the group and sodium citrate seems to be the agent of choice. This combination seems to lessen the tendency to renal damage, especially to the accumulation of crystals. In the presence of renal impairment, sulfadiazine is considered comparatively safe, certainly the most satisfactory of the group.

Care should be exercised to insure sufficient water intake. A urine output of 1200 to 1500 cc. is generally accepted as the standard of safety. Large doses of ascorbic acid are now employed in such conditions as pneumonia, and it is thought by some that it may have a favorable influence in reducing the toxicity of the sulfonamides.

Nausea is the dominant symptom when sulfapyridine is employed. In a fairly large percentage of the cases, the drug must be discontinued on this account. Some nausea may result from the use of any of the other compounds. Crushing the tablets and administering them in cold milk or some other acceptable beverage seems to have a favorable influence. The use of nicotinic acid to lessen nausea has been largely discontinued. A hypodermic of two grains soluble phenobarbital will often result in relieving the nausea sufficiently for the medication to be continued. The use of the ice bag, the ice collar, and other measures of general care should not be neglected until emesis develops, but employed at the first evidence of nausea.

Blood dyscrasias constitute a real threat. In employing sulfanilamide some cyanosis is usually present. This is less frequent with other members of the group. Methylene blue will largely prevent or relieve this condition, though it also tends to produce nausea. For the more serious blood changes, eternal vigilance is the price of safety. Should they develop, the prompt withdrawal of the drug and remedial measures such as transfusions may be indicated. Fever, as a result of the medication, occurs more frequently than is generally supposed.

Skin eruptions occur, particularly with sulfathiazole. The development of the nodular lesions calls for prompt discontinuance of this agent. Psychoses seem to be reported more frequently with sulfadiazine but fortunately they are rare. A certain amount of discomfort may be caused by any of the sulfonamides but usually does not call for discontinuance of the medication.

"Toxic reactions after sulfadiazine treatments are less frequent and less severe, than after the use of the other sulfonamide drugs. This, together with the high concentration of free drug obtainable in the blood, suggests that pharmacologically sulfadiazine and sodium sulfadiazine present definite advantages over the other sulfonamide drugs in general use[9]."

The dosage seems to be fairly well established, though there is considerable variation in the recommendations of different clinicians.

It is always desirable to control the course of therapy with determinations of the drug concentration in the blood. Many reports tend to minimize this advantage by demonstrating, for example, that in pneumonia there is little if any difference in the results from concentrations in the blood of 3 to 15 milligrams; but in many other conditions the blood concentration is of major importance. In pneumonia, the standard dosage seems to be 2 gm. for the first dose, then 1 gm. every four hours day and night. Some give 2 gm. for the first two doses, and in the case of sulfadiazine many give 3 gm. the first dose, then 1 gm. every four hours.

Greer[10] feels that in pneumonia the drug should be continued in all cases until the temperature has been normal for several days, and continued in reduced dosage until the resolution in the lungs is complete. Many reduce or discontinue their use sooner.

It would certainly seem desirable to consider weight in adjusting dosage. When we speak of the dose of a drug, we mean the amount for an average individual (154 pounds). In chemotherapy, the agent acts by being in the blood in a certain percentage concentration. As the relation of blood to body-weight is fairly constant, it would seem desirable to take the weight of the individual into consideration when there is any marked deviation from the average.

The sulfonamides are best administered by mouth. Where one of these agents is indicated and for any reason it cannot be taken or retained by mouth, the sodium salt may be given intravenously. Many recommend that administration be in a large amount of normal saline; some have suggested dextrose solution. New and Non-Official Remedies and the manufacturers urge that the sodium salts be given in sterile, distilled water in a concentration of about five per cent. Intravenous administration should be continued only until the drug can be given by mouth.

If blood cultures are to be made or sputa typed, the specimens should be collected before the first dose of the drug has been administered.

The sulfonamides are being used extensively as local applications in injuries and in surgical procedures. Sodium salts are being used in solution for sprays and irrigations but may be highly irritating and many reports of more or less extensive damage have been published.

The combined treatment, employing the sulfonamides with other agents, has been advocated. For example, it is rather generally recommended that in pneumonia should the patient not show improvement in 36 or 48 hours that type specific serum be employed. In genito-urinary infections hyperpyrexia is rather extensively used with the sulfonamides. In other conditions, such as subacute bacterial endocarditis, many employ hyperpyrexia, heparin, etc., as adjuncts to the chemotherapy.

SUMMARY

The first report on the sulfonamides was followed promptly by extensive studies and reports by scientific investigators over the world.

Four of these compounds have been established as having proved merit.

Sulfadiazine is largely replacing the other members of the group.

Much can be done to lessen the discomforts and dangers of this chemotherapy.

REFERENCES

1. Bethea, O. W.: Editorial. The Year Book of General Therapeutics. Chicago, The Year Book Publishers, 1942.
2. Spink, W. W.: Sulfanilamide and Related Compounds in General Practice. Chicago. The Year Book Publishers, 1941.
3. Long, P. H., and Bliss, E. A.: Para-amino-benzene sulfonamide and Its Derivatives; Experimental and Clinical Observations on Their Use in the Treatment of Beta-hemolytic Streptococcic Infections: A Preliminary Report. J.A.M.A. 108:32 (Jan. 2) 1937.
4. Siegel, L. S., Rosove, Leon and Bowers, A. G.: Sulfanilamide in the Treatment of Erysipelas. Annals Int. Med. 16:262 (Feb.) 1942.
5. Gordon, M. B., Solomon, N. H., and Pearlman, S. F.: Value of Sulfanilamide and Scarlet Fever Antitoxin in Treatment of Scarlet Fever. J. Pediatrics 19:76 (July) 1941.
6. Rantz, L. A., and Cutting, W. C.: Choice of Sulfonamides. Cal. and West. Med. 55:29 (July) 1941.
7. Banks, H. S.: Sulfathiazole in Cerebrospinal Fever Lancet. 1:104 (Jan. 25) 1941.
8. Finland, Maxwell, Strauss, Elias and Peterson, O. L.: Sulfadiazine. J.A.M.A., 116:2641 (June 14) 1941.
9. Wheeler, Charles, and Plummer, Norman: Sulfadiazine and Sodium Sulfadiazine: A Comparison of Certain of Their Clinical and Pharmacological Values. Annals. Int. Med. 16:269 (Feb.) 1942.
10. Greer, A. E.: The Chemotherapy and Serotherapy of the Pneumococcal Pneumonias. Medical Rec. and Annals (Jan.) 1942.

Diabetic Coma*

ALLEN H. TIGERT
St. Louis, Mo.

Pneumonia and diabetic coma are probably the most acute of the strictly medical emergencies that one meets in general practice. Since the advent of the sulfanilamide series the pneumonias can be combated readily and treatment instituted without delay. Diabetic coma should be treated just as thoroughly; however, the diagnosis is possibly more difficult. The term coma implies a degree of unconsciousness deeper than mere unawareness of surroundings. In coma the ability and tendency which characterizes all animal beings, namely, reaction to stimuli, is completely or almost completely lost. All the voluntary and many of the reflex reactions which protect the body against injury and destruction are abolished. Thus we see the pathological changes involve the higher brain centers.

Some idea of the prevalence of diabetes may be gained from the following statistics: 30.587 people died of the disease in 1937, or 2% of all deaths were attributable to it. Joslin estimates that approximately one-half million people have the disease, and that two and a half million of the present population will ultimately develop it. One-half the cases occur between the ages of 40 to 60 years—later the rate falls sharply. It is not a manifestation of old age. Diabetic coma before the advent of insulin was the inevitable end of most diabetics. Now it is encountered only in a small percentage of patients, but still remains a problem in therapy as the mortality rate in coma runs about 12%.

In searching for the cause of unexplained coma the etiological factors must be kept in mind. They may be caused by cerebral injury, by trauma, inflammation, neoplasms or poisons, endogenous or exogenous. When one is confronted with the necessity of determining the cause of coma on the basis of symptoms only, it is a difficult diagnosis problem which should be met immediately as the patient's life or the residual disability may to a large extent depend on immediate treatment.

In these cases the odor of the breath, alcoholic, acetonic, urinous, or characteristic of some drug or poison is a very valuable aid. In cases in which alcohol seems to be the cause precautions must be taken to rule out other possible etiological factors. Patients in the deep, coma-like stupor of alcoholism may sometimes be aroused temporarily. Respirations are deep and slow. Evacuation of the stomach and catheterization should clear up the diagnosis.

Barbiturate poisonings, accidental or intentional, are coducive of profound narcosis. The reflexes are increased rather than decreased. The respiration is shallow, the pupils contracted. Stomach tube and enemas sometimes arouse these patients. Picrotoxin, intravenously, has been advocated for barbiturate poisoning.

In epileptic coma there is usually evidence of the preceding convulsion, such as frothing at the mouth, tongue biting, and other injury. Epileptic coma is usually not of long duration.

Hysteria is common but other possibilities should be ruled out. This condition can often be cured if incident to diagnostic or therapeutic measures, especially if more discomfort is allowed than is warranted in the patient's estimation. Proposing hospitalization for immediate operation may have the desired effect of bringing the patient out of "coma."

A urinous odor of the breath is the most striking symptom of uremic coma, however, when uremia reaches the coma stage the outlook is almost hopeless and hasty evaluation of the various symptoms for immediate treatment is not practical.

In carbon monoxide poisoning the coma is usually characterized by the calm appearance of the patient. The skin may be pale, but the lips are cherry-red, and the cheeks are flushed, the flush sometimes covering the entire body surface. Inhalation of 95 per cent oxygen and 5 per cent CO_2 are probably the most parctical methods.

Cerebral apoplexy is among the most common causes of coma. There are usually signs of a pre-existing hypertension. Other common signs of cerebral apoplexy are cyanosis, stertorous breathing, and drooling. Paralytic symptoms vary with the site of the cortical pressure. The patient should not be moved other than raising the head slightly. Early catheterization may prevent loss of bladder tone.

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The symptoms of diabetic coma are attributable to the accumulation of aceto-acetic acid and beta-hydroxybutric acid on the body which induce an acidosis, and reduce the carbon dioxide combining power of the blood. The stupor and other symptoms of diabetic coma are attributable to the combination of the circulatory failure, dehydration, acidosis, electrolyte imbalance with loss of base from the blood and tissues, and the direct toxic effect of certain of the ketone bodies.

Diabetic coma is usually recognizable by the acetone odor of the breath; in diabetic coma the blood pressure is low. The respiratory rate is not increased, but each excursion is very slow and there is no interval between respirations. This is known as Kussmaul breathing and is indicative of air hunger. The breath has the fruity odor characteristic of acetone. The pulse is rapid; the skin is dry, and the pupils are dilated. The eyeballs are often soft. Drowsiness, stupor, and coma follow in the order named. The blood sugar is greatly elevated—often to 1000 mg., the carbon dioxide combining power is low, 10 to 15 volumes per cent, and the urine contains ketone bodies, sugar and granular casts. The blood chloride is low: the non-protein nitrogen high. Leucocytosis and high hemoglobin content are a result of dehydration. If the patient is an insulin-user the possibility of insulin shock must be borne in mind. In hyperinsulinism the breathing is normal, and the skin is moist, in contradistinction to the dry skin of diabetic coma.

In the treatment of diabetic coma one must always remember that the person is dying primarily from lack of insulin. It is a fact which must be emphasized that fear of death in coma should always be from underdosage rather than from overdosage of insulin. An insufficient dosage will almost certainly result in death whereas according to the literature, death from overdosage of insulin in the treatment of coma is exceedingly rare.

Lack of insulin, acidosis, and dehydration often complicated by infection are the conditions met with most often in diabetic coma. In recent years there has been a tendency to treat the coma with insulin alone without using specific methods for combating the acidosis as was so heavily emphasized before the advent of insulin. As has been mentioned before, a heavy initial dose is advocated. Since 1937 one group has been using the following procedure: The patient is given 100 units of unmodified insulin intravenously, and 100 units of unmodified insulin subcutaneously along with 200 units of protamin zinc insulin subcutaneously. It is of decided value to give the first dose intravenously. This insures quick action of the insulin—and is essential for recovery, particularly in the very severe cases. Much of the insulin so injected is undoubtedly wasted by its excretion in the urine, however, by the time it begins to lose its effectiveness, the action of the unmodified insulin injected subcutaneously has begun to manifest itself, and by the time this insulin is losing its effectiveness the protamine zinc insulin has begun to manifest itself. These cases were given on the average of 781 grams of glucose during the first 34 hours of treatment. The average amount excreted in the urine at this time was 53.4 grams.

Dehydration may be extreme. Hartmann has found in children that the plasma volume may be reduced to almost half of its normal volume. Thus we see circulatory failure may be an immediate cause of death in diabetic coma. Ordinarily this can be corrected by the use of normal saline and glucose solution. In a majority of the cases if insulin is adequate and the dehydration is corrected the acidosis will take care of itself.

In extreme cases or when renal insufficiency is present administration of alkali restores the serum to normal more rapidly than saline alone. Hartmann has advocated the use of sodium lactate. He considers it preferable to sodium bicarbonate for two reasons. 1) The sodium lactate is a more convenient solution to give parenterally. 2) It is only slowly converted into sodium bicarbonate, and he believes that there is no danger of alkalosis of clinical importance through the use of sodium lactate. The danger with sodium bicarbonate is of course that too large a dose may be given and alkalosis may result. This can be avoided by careful study of the patient and by the use of alkali in only moderate amounts. Isotonic solution is prepared from the best quality of sodium bicarbonate, 13 grams being dissolved in 1 liter of sterilized water immediately before use. The bicarbonate powder is not sterile, but experience has demonstrated that there is no risk in the intravenous injection of a solution made up immediately before administration. The solution will not stand sterilization by heat, for the bicarbonate gives off carbon dioxide and is changed into the strongly alkaline carbonate. If facilities are available for CO_2 determinations a chart has been constructed by Van Styke indicating the amount of solution to be given. If such facilities are not available not more than two liters of bicarbonate should be given at the start of treatment. This dose will suffice to relieve the more severe clinical symptoms.

Once the blood sugar has been brought to 120 to 140 mg. the dosage should be reduced to the minimum necessary to keep it at that level with the urine sugar free. Joslin states that a blood of 200 mg. and urine sugar free is perfectly safe. After infections have been cleared, abscesses opened and drained, or after any surgical problem in which sepsis has been removed, the blood sugar will drop; therefore the dosage of insulin must be reduced or the patient will go into shock.

When laboratory facilities for CO_2 and sugar determinations of the blood are not available the progress of treatment can be determined by frequent urine specimens obtained by the use of a retention catheter. Using this, hourly specimens of urine may be obtained and checked for sugar and acetone. Fluids such as normal saline, Hartmann's solution, normal bicarbonate, and glucose should be administered till the acidosis begins to subside, as indicated by the gradual disappearance of the positive acetone reaction. After this stage has been reached, specimens should be obtained at longer intervals and enough sugar or glucose given to keep at least a trace of sugar in the urine. Hypodermically very large doses of insulin have been given and the danger of hypoglycemia shock should be guarded against.

By way of summary the following points may be reviewed:

(1) Diagnosis is established by sugar and acetone in urine, dry skin, labored breathing, dehydration, and often infection and history of diabetes.

(2) Adequate dosage of insulin is essential. Initial dosage of 100 U. intravenously and 100 subcutaneously is not excessive. The danger is from too small rather than too large dosage.

(3) Dehydration must be corrected immediately. Glucose or normal saline is usually sufficient. In severe cases of acidosis Hartmann's solution or normal bicarbonate solution may be needed.

(4) Secondary hypoglycemia must be guarded against, as large doses of insulin have been given.

(5) Foci of infection, if present, must be removed.

A new-old gag: G-man: So he got away, did he? Did you guard all the exits? A smart cop: Yep, but we think he must have slipped through one of the entrances.

Cancer Control In Public Health Departments*

K. O. STINGILY, M.D.
MERIDIAN, MISS.

OUR CHIEF concern is the indigent cancer patient. There is no person who deserves more sympathy than this pitiful patient who has been taught to fear a lingering death; or, more pitiful, has been guided to a quack who filches from him and his dependents monies they have borrowed and offers only a more horrible and mutilating death; or again has not been informed of his condition at all and goes from place to place seeking advice from those who are not in a position to give it.

Our records will show the indigent cancer patient has a larger family than the average American family. This is true in part because our population is largely rural and because of the social status of that patient. We have no right as citizens to allow this patient plus this family to become public charges if for no other reason than financial. Fortunately, we of this great democratic nation still place the greatest valuation on human life.

The concepts of public health have changed and particularly now in our national emergency. Public health can be considered a local problem—it is a national problem. Our public health *must* be bettered. Therefore, cancer being second in death rate, it is our particular duty to promote control of this disease.

Because of the constant and steady increase in mortality from cancer, the United States Public Health Service has long recognized the necessity for cancer control. In 1937 by an act of Congress $750,000 was appropriated for cancer research. Other monies were appropriated for part help to state and community clinics. Now the President has secured funds to rehabilitate our young draftees. Cancer takes its proportionate share even in these young men.

The history of public health control of such communicable diseases as typhoid, diphtheria, smallpox and tuberculosis should leave no doubt in anyone's mind of the efficiency of a cancer control program once it is instituted.

Cancer is curable and if seen and treated early offers more hope of cure than most diseases which cause death. Records show that last year over 1500 people in Mississippi died of cancer, and many more probably died of it but were not reported properly. In our nation, cancer was second in death rate.

This is our challenge. It must be borne by you, our protectors of public health. Cancer, though not a communicable disease, is a foremost public health problem in Mississippi today. In this state cancer death rate has risen from seventh place in 1930 to fourth place in 1940. In Lauderdale County this death rate has risen from seventh to third place in the same length of time, from 67.0 in 1929 to 85.6 in 1940, per 100,000.

It seems to be a fact that the general run of doctors know very little about cancer, or cancer control. Our public health officers can impart much knowledge in this our first line of defense, and effectively.

Our lay population must be educated in the signs and symptoms of cancer and to see their doctors. These doctors or clinics must be available at not too distant points. Who is better suited for this work than our local health departments?

A central clinic to serve the entire state will not suffice. We must have regional strategically located clinics. It appears, with only a very few exceptions, the locations selected by our pathologists will be sufficient, for these are placed so as to serve the greatest number of people and the pathologists are liberal with their time and study.

Dr. Louis H. Jorstad of the Barnard Free Skin and Cancer Hospital, St. Louis, in an address to workers in cancer control states:

"I am of the group, however, that is not in favor of the building and maintenance of numerous government hospitals. Financial aid to communities will make it possible to modernize and enlarge general hospital facilities adequately. The Ellis Fischel State Cancer Hospital at Columbia, Missouri, cannot take care of the indigent cancer patients in the state. It would be most impractical for the legislature to provide funds to build and maintain a hospital adequate for such a purpose. Many other hospitals are as adequately equipped to diagnose and treat cancer."

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*Read before Clarksdale and Six Counties Medical Society, Clarksdale, Miss., March 11, 1942.

We have from time to time heard the same story by other men connected with cancer centers. Massachusetts is solving its cancer problem by well located clinics through the state.

I should like at this time to give a brief report of the Cancer Control Society of Lauderdale County.

Our Cancer Control Society was organized in September last year because of the actual necessity of cancer control and care of the indigent cancer patients. We were most fortunate in securing the sponsorship of the Business and Professional Women's Club who have played no small part in our success. Money was furnished by the Community Chest.

The Lauderdale County Health Unit very generously furnished space for a diagnostic clinic and nursing service as well as case finding. I am pleased to say these nurses are splendid and are doing an enthusiastic work. They have distributed most of the literature which will number approximately 10,000 pieces.

There has been, due to the efforts of the Business and Professional Women's Club, thirty-eight radio talks on cancer, seventy-nine news articles, talks to all civic clubs and many separate groups. Further publicity has been received from the Community Chest and the picture, "Choose to Live," has been shown to approximately 8,000 people which included schools and clubs.

Arrangements were made to locate our surgery clinic in the Matty Hersee Hospital and all procedures with the exception of a very occasional cautery case are treated there. Medical and nursing services have been donated at no cost. Arrangements have been made to secure radium, deep x-ray therapy and diagnostic x-rays at cost. Our pathological work has been donated, but we feel now that this service should have some remuneration.

Our staff is on a volunteer basis, rotating each four months with the exception of a pathologist and one clinician. The staff is composed of a surgeon, gynecologist, ophthalmologist, therapist, pathologist, and dentist.

The diagnostic clinic is held once weekly on Wednesday and the surgery clinic once weekly on Thursday, the same staff serving both clinics in order to complete the service and allow better follow-up service.

Our services for free treatment have to be limited to Lauderdale County due to inadequate funds and state barriers. However, any physician may send patients from any location for diagnosis and if he certifies to their inability to finance themselves, treatment will be given at cost. We are now working on a plan to incorporate surrounding counties. A number of counties have sent representatives to seek these services.

Our clinics since December 11, 1940, have seen 158 new cases of which 78 were cancer. Thirty have been treated surgically, sixteen with radium, thirty-five with x-ray; six have died, three have deserted, and nine were hopeless. Due to the length of time required to lapse before cure can be reported no figure can be given at this time; however, we have no reason to believe these results will not be equal to those of other similar clinics. All cases treated are seen in our follow-up service from twelve to twenty times annually for the first year, and then twice annually for life.

We feel these clinics and our entire organization is a coöperative society and see no reason why similar societies would not serve a useful purpose throughout the state.

The most gratifying expressions of appreciation have come from the people of Lauderdale County and Meridian. They have been taught and see the necessity of cancer control. Most of the ten agencies operating under the Community Chest have had their budget reduced. The cancer control society has had its budget tripled.

Since there is no financial help available for cancer patients outside Lauderdale County, an amendment to the per capita bill for indigent sick is being urged and will be introduced to allow the indigent cancer patient to be treated by private clinics which we have available. We urge you to use your support in this measure.

DISCUSSION

DR. N. C. KNIGHT (Meridian): I am deeply grateful to you for this opportunity of being here with you today. As most of you know, I spent several very pleasant years here with you, and I am always glad to be back.

A workable and practical cancer control program has been presented to you, and it is my opinion that in several of the larger counties in the state this same type of cancer control program could be carried on by different agencies, all coöperating. This is a disease that affects a very large number of people, and it is for that reason that it is a very important public health program. We know it is a public health problem, but we cannot estimate its magnitude because reporting of cases and deaths is so incomplete that we are not able to determine what the problem is accurately. Therefore, it seems that our first step should be to determine as nearly as we can what the problem is by securing more complete reporting of cases and deaths. In 1938, in Lauderdale County, we began to put forth a concerted effort to secure more complete reporting.

It is my opinion that a cancer control program should be a part of the work of every health department in the state. By that I do not mean to say that every health department should try to equip itself with all the necessities for diagnosis and treatment. It is definitely not practical for every county health department to have its own clinics because the equipment necessary is too expensive and the need for highly trained medical and surgical personnel to operate them cannot be met by every county. Therefore, it would seem that the practical way to handle the situation would be the establishment of regional clinics throughout the state, and then the surrounding counties could send their patients to these regional clinics for diagnosis and treatment.

Integral parts of the cancer control program that could be carried by every health department are as follows:

1. Public education (this is one of the most important factors in the whole control program and is one of the keys to the problem).
2. Case-finding.
3. Case follow-up. Coöperation with medical and dental professions and Women's Field Army.
4. Furnish clerical assistance, and office space, and equipment in counties where the clinics are located.

The ideas that I have expressed to you are all simply my own personally and are not to be construed as being the attitude of the State Board of Health toward this problem.

Dr. G. S. Bryan (Amory): I am happy to be here today to discuss Dr. Stingily's paper. The doctor has covered the subject very thoroughly. I wish to congratulate him on his paper. I will confine my remarks to cancer control both from the individual physician's and surgeon's viewpoint and their relation and coöperation with the State Health Department.

We, as doctors of medicine, are indicted by the laymen in that we have so far done very little in the control of cancer. Certainly, we have done little enough. We hear, "The medical profession has done much in the control of other diseases, why not do something about cancer?" Why do we not control cancer? Why do we not control the mortality of cancer which now stands near the top on our mortality? We have practically stamped out other diseases which we thought equally as hard to get rid of as cancer. Doctors of this time hardly ever have any experience with smallpox, typhoid fever, scarlet fever, diphtheria and several other such diseases. Only by concerted efforts and hard thinking and education can we hope to correct this menace to the human race.

By organization, proper training and education, hard work and clear thinking, can we expect results. We must become cancer conscious. We must look for this disease and find it in its very beginning and with the treatment measures at hand, must we stop it in its beginning. We have the diagnostic and treatment measures. Our examinations must become more thorough. Biopsies must be done by competent pathologists. The disease must be found early and treated thoroughly. Periodic physical examinations must be encouraged. There is no cancer age, however, more cancers are found in the age after middle life than before that period. No tissues are exempt. Constant irritated tissues are more prone to cancer, hence, we must reduce irritation. The female is more prone to the disease, due possibly to the sex side of life. Every woman past middle life should especially be examined and the damages of birth repaired. Cervical irritations, and pathological conditions of the other part of the generative tract, should be removed even before cancer appears.

In order that the indigent might have the proper examination, education and treatment, district clinics should be established under the personnel of the profession and in connection with the Health Department. Here these unfortunates can be reached. Deep therapy and radium can be available and proper surgery done.

We have a long road to travel to reduce the mortality of cancer, but with more thorough training, more education as to early diagnosis, more thorough treatment with surgery, deep therapy and radium, we can largely correct this menace that now confronts the human race.

Few Important Diagnostic Points and Pre-Operative Treatments of Most Common Abdominal Emergencies

W. J. AYCOCK, M.D.
CALHOUN CITY, MISS.

IN CONSIDERING acute conditions of the abdomen, I think we should keep in mind the anatomy of a normal abdomen and the relation of the viscera in each quadrant, and on examination try to determine whether or not we are dealing with a normal or an abnormally located viscera and thereby be better able to make a correct diagnosis from the symptoms and physical findings.

When we think of conditions producing an acute abdomen, we should always consider the appendix first, because the appendix is responsible for the great majority of all acute abdominal emergencies. Some men have gone so far as to estimate its frequency as producing 95 per cent of acute abdominal conditions. We shall not take up the symptoms of acute appendicitis in detail, as most everyone is familiar with them. However, we shall mention the more important symptoms in order that they may be used as a basis for differentiating other acute abdominal conditions. Because of the frequency of appendicitis, consider all pains, regardless of their location and character, appendicitis until proved otherwise. The typical onset is pain in the epigastrium, which occurs very frequently in the early morning hours with gradually increasing intensity localizing a few hours later in the right quadrant. The patient usually becomes nauseated and may vomit. Tenderness in the right quadrant in the region of the appendix is probably the most diagnostic finding. There may be rigidity. The temperature and leukocyte count may or may not be elevated. Now, the most common surgical emergencies which may be mistaken for appendicitis are: acute cholecystitis, acute intestinal obstruction, perforated peptic ulcer, ruptured extra-uterine pregnancy.

Acute cholecystitis, when the gallbladder is low, may resemble appendicitis. The pain, however, is more likely to catch the breath and go through to the back. Muscle spasms and tenderness are higher. The tender fundus of the gallbladder may be felt. A previous history of indigestion accompanied by gas formations on the stomach are nearly always present, and occasionally attacks of jaundice.

In *acute intestinal obstruction,* the cardinal symptoms are pain, vomiting and the patient feels that his bowels must move but fails to pass gas or feces; also the x-ray plate is of great importance in this condition and may show multiple fluid levels which aid tremendously in the diagnosis. In many of these conditions we have a history of hernia or history of a previous operation, causing a large percentage of these conditions.

In cases of acute *peptic ulcer with perforations,* the epigastric pain is so violent in character as to shock the patient tremendously. The abdominal walls immediately begin to take on board-like rigidity and large doses of morphine and even hyascine at times will not relieve the agonizing pain. In rare cases, there may be a slow leak from an ulcer in which the symptoms are very much like those of appendicitis due to the contents drifting into the right iliac fossa. An ulcer history, so familiar to us, is of paramount importance in making this diagnosis, but is not always present.

Ruptured extra-uterine pregnancies are usually preceded by a history of missed periods, or at least, an irregular period, low abdominal pains, bleeding from the uterus and, if the rupture is complete, great shock and pallor. Vaginal examinations may reveal a boggy mass in the cul-de-sac and an important finding is pain with pressure on the side affected when pushing up on the cervix.

Now there are many other conditions producing pain in the abdomen such as pneumonia, acute gastro-intestinal disorders, typhoid fever, lead colic, renal stone, acute salpingitis, coronary occlusion, torsion of ovarian cyst, renal infection, mesentery thrombosis, pancreatitis, etc., which we shall only mention here, but we should always bear in mind. I should like to emphasize again the differential points in the diagnosis of the five most common conditions we have described, in the following chart:

ACUTE APPENDICITIS

1. Pain localizing in right iliac region
2. Nausea and vomiting
3. Tenderness over the appendix.

ACUTE CHOLECYSTITIS

1. Pain and tenderness higher
2. Radiation of pain
3. Palpation of gallbladder
4. Previous history of gas and indigestion.

ACUTE INTESTINAL OBSTRUCTION

1. Failure to pass gas or feces
2. History of hernia or operation
3. X-ray
4. General pain, nausea and vomiting.

PERFORATED PEPTIC ULCER

1. Violent pain
2. Board-like rigidity
3. Previous ulcer history in most cases.

RUPTURE EXTRA UTERINE PREGNANCY

1. Missed menstrual period
2. Uterine bleeding
3. Signs of shock
4. Pain on affected side when cervix is moved.

Regardless of the diagnosis and whether or not we are able to make an accurate diagnosis of any one of the above mentioned conditions, the general principles in the treatment of all of them are the same, except probably colecystitis in some cases, namely; relieve the pain, and get the patient to a hospital immediately for surgical interference. Too much emphasis can not be placed on early surgery and early surgery is the key to a lowered mortality rate. Disregard the white cell count and temperature in deciding on an early surgical interference, and when the least bit in doubt, operate anyway. It is better to remove many normal appendices through mistake than to allow one person to die awaiting all the typical symptoms of any one of these conditions to come about. In all cases forbid laxatives or enemas.

In this connection I should like to give a few statistics of my own. In twenty-five years as a general practitioner, I judge I have had my share of appendicitis. I do not have an accurate list of all the cases I have had, but as near as I can get to this list, there are around 275 or 300. The Houston Hospital has a record of approximately 240 of them. There has not been a single death. Now, I am no surgeon. I did not operate on a single one of these cases, but I did advise operations immediately, whether I had made an accurate diagnosis or not and they were operated on. I have had quite a number of cases of cholecystitis with no deaths. I have had several cases of intestinal obstruction with about 50 per cent deaths. I have had six cases of perforated peptic ulcer with no deaths. I have had probably 25 or 30 cases of ruptured extra-uterine pregnancies with no deaths.

In this record I have given you, if it be good, the only credit I deserve in it at all is getting these cases to the hospital and surgery immediately. In this connection, may I say that I think when we doctors fail to get them to a hospital and try to blame it on the family or the patient, we are simply kidding ourselves, because if we try hard enough and put the matter up to the patient in the right way, he will listen to us and be governed accordingly. When the nearest hospital to this section was Memphis with no roads or mode of transportation except wagon and baggage car, and the people were not trained to realize the benefits of modern surgery, it was a problem to get a patient's consent to go to a hospital. But since we have hospitals and the people educated to their benefits, and modern modes of travel with good roads, the only trouble I have is keeping some out of the hospital that do not need to go.

Diagnosis of Early and Secondary Syphilis*

B. B. HOOPER, M.D.
ITTA BENA, MISS.

IT IS IMPORTANT for physicians to be able to recognize syphilis, when one realizes that one person out of every ten here in the United States has this disease in some one of its many forms and stages. This is especially applicable to physicians in Mississippi, who are forced to acknowledge the sardonic and humiliating reality that this state carries the highest per capita infection of any state in the Union; largely because of the numerical predominance of the negro race, in which it flourishes like the green bay tree.

It is then peculiarly appropriate that the doctors here in the Delta take a sincere and enthusiastic interest in this disease, because of our many negroes on whom we depend for servants and field laborers.

Dr. E. Gurney Clark, assistant director of the Vanderbilt University Venereal Disease Clinics at Nashville, Tennessee, read a paper before the Mississippi State Medical Association in April, 1938, and had this to say: "It has been estimated that there are 400,000 cases of syphilis in the colored race and at least 40,000 cases of syphilis in the white population of this state. In the past ten years reported cases of syphilis are far in excess of reported cases of any infectious disease other than gonorrhea and influenza. A survey for the preceding ten-year period showed that there were in Mississippi 147,531 more cases of syphilis than of poliomyelitis; 147,547 more cases of syphilis than of smallpox; 140,470 more than of scarlet fever; 140,261 more than of typhoid; 137,843 more than of diphtheria; 130,414 more than of tuberculosis; 98,817 more than of mumps; 92,984 more than of chicken pox and 23,419 more cases of syphilis than of measles."

My efforts are to be directed to a limited consideration of the importance of an early diagnosis of primary and secondary syphilis. I choose this subject and this particular phase of it for the reason of its constant prevalence, and the further fact of the extremely high percentage of infection among the negro race, with which this section is so heavily populated.

There is no disease in the physician's whole category that is in more instances enshrouded in obscure, confusing, imitative and indefinite symptoms and signs, both objective and subjective, than syphilis. As you recall, Dr. Osler referred to syphilis as the "great imitator" because it so often resembles many other diseases in its clinical manifestations. In this connection, Dr. Osler also called it the "great killer," and has this further to say: "Any physician who can master the subject of syphilis and can make an accurate diagnosis of the same is competent to practice medicine."

Interest in this subject of syphilis is not alone confined to the average and regular practicing physician, but to all the specialists as well. The eye, ear, nose and throat man finds it of paramount importance, when it is so often the source of blindness and deafness, and when ulcers of the tonsils and pharynx can be mistaken for follicular tonsillitis and endurated pharyngitis, and in many instances can only be cleared up by dark field or serology, or both.

The surgeon is interested at all times, not only in the immediate lesions or the surgical problem at hand, but in the frequent necessity of having a blood donor. (And here let me say that it was my understanding while in the Vanderbilt Syphilitic Clinic that they consented to syphilitic patients as blood donors after the primary stage on the basis that the spirochete pallida is rarely found in the blood stream, but is more often carried by the lymphatic system).

The orthopedic surgeon is concerned, as syphilis is his first thought when bones fail or are slow in uniting. Then of course the dermatologist and allergist, in my opinion, should be consulted in the study of this disease for a correct diagnosis in all of its stages.

Dr. Joseph Earl Moore, of Johns Hopkins, has said, in speaking of the physician's attitude toward this disease, that we have a very low index of suspicion calmly sailing under the false banner of misconception that only negroes, prostitutes, criminals and bums have syphilis, and that our clientele like Caesar's wife, is above reproach. Unfortunately there are a few among our fraternity who still look upon it as a disgrace, and not as a disease, and who would consign these victims to the tragic punishment of neglect and ostracism as a penalty for their "unpardonable sin," impervious to the fact that forty to fifty per cent of all infections are contracted innocently. that when early recognition is established and adequate treatment administered. nearly 100 per cent of these patients could and would be cured. This attitude prevails to a greater degree among the specialists, especially the eye. ear. nose and throat men who assume that their clientele comes from that stratum of society which is rarely infected. Syphilis is the predominant cause of a large amount of blindness and deafness. and it is no respecter of persons, attacking the rich and socially prominent as well as the poor and destitute.

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*Read before the thirty-seventh semi-annual meeting of the Delta Medical Society, Greenwood, Miss., April 10, 1940.

Who is concerned with and who must diagnose syphilis? First. of course. is the family physician or general practitioner. Now. what is our problem? I can do no better than quote for our consideration Dr. Earl Moore's six diagnostic maxims in primary syphilis.

"1. Any genital sore in male or female is possibly primary syphilis, until proved otherwise.

"2. Any indolent lesion on the body (especially on the lips, tonsils or fingers) which fails to heal in two weeks may be primary

"3. The diagnosis of primary syphilis is a laboratory and not a clinical procedure.

"4. Do not treat suspected primary syphilis locally until repeated dark fields are negative.

"5. Do not give anti-luetic treatment on suspicion. Prove the diagnosis.

"6. There is reason for urgent haste in diagnosis; hours count."

Now, personally, I must take exception to the third and fourth of these maxims, for the reason that the application of the dark field is assuredly an undertaking not to be indulged in except by an especially trained and competent technician. Further, in the face of definite and well-defined clinical manifestations, coupled with a known and admitted history of contact exposure, I feel that we are justified in many instances to make a diagnosis, and to institute intensive and adequate treatment, even though the disease is not of sufficiently long standing to react in positive serologic finding. However, repeated serologies should be done.

According to the five coöperative clinical group clinics, 90 per cent of their patients have already developed sero-positive primary or secondary syphilis. This delay in early diagnosis is not due alone to the patient's tardiness in reporting to the physician, but to the physician's slowness in arriving at a diagnosis. It is claimed that urologists and gynecologists in this respect are the worst offenders. However, we as physicians well know it is the exception rather than the rule for a patient to come into our offices and announce the fact that he has syphilis. The average patient is always reticent and secretive about the matter, with an obstinate attitude of concealing the real facts about any of the venereal diseases. It is therefore necessary for the doctor to exert all the eliciting arts of diplomacy to obtain the pertinent and essential information necessary for the interpretation of the existing situation and diagnosis, and here is it necessary that this disease be differentiated from thirteen diseases simulating primary genital syphilis, to-wit: gonorrhea, chancroid, herpes progenitalis or semplex, scabies, venereal warts, carcinoma, granuloma inguinale, lymphopathia venereum, gangrenosa, traumatic lesions, pyogenic lesions, secondary syphilis, and late syphilis gumma.

Dr. Moore further laid down six maxims for the study of secondary syphilis, like the six for the recognition of primary syphilis, both of which should be learned by heart by every general practitioner and, as for that matter, by all physicians in all the specialties, because the correct diagnosis of secondary syphilis is often extraordinarily difficult, even by the expert syphilologist and dermatologist. Accepting the following maxims enormously simplifies the possibility of correct diagnosis:

1. Do a blood serology follow-up every three months on any lesion which might be primary syphilis.

2. For generalized skin eruptions, do a serologic test.

3. For any sore mouth or throat which does not heal in ten days, do a serologic test.

4. For any unexplained patchy loss of hair,

do a serologic test.

5. For any iritis neuroretinitis or deafness, do a serologic test.

6. For any vague bone pains or polyarticular arthralgia, acute or subacute, or chronic infectious arthritis, do a serologic test.

The serologic follow-up on any lesion that might possibly have been primary syphilis makes it important and highly desirable to recognize secondary syphilis before the cardinal clinical manifestations appear, and the serology is almost always positive before their actual appearance. And here it is well to remember that these supposedly characteristic lesions may be completely absent or so trivial and evanescent as to be overlooked by both patient and physician. However, 95 per cent of secondary syphilitic patients will present one or a combination of the following: generalized skin eruption, mucosal lesions, alopecia, arthralgia and arthritis, and, at times, some of the other many and more rare manifestations. The skin lesions alone must be differentiated from fifty to sixty other skin diseases, the most common of which are as follows:

Acne vulgaris, erythema multiforme, urticaria, seborrheic dermatitis, arsenical keratosis, leukoderma, pityriasis rosea, varicella, chloasma, tinia-vesicolor, dermatitis venenata, psoriasis, measles, arsphenamine dermatitis, scabies, scarlatina, lichen planus, pyoderma, typhoid fever, papular tuberculides, ecthyma, toxic erythema, nodular leprosy, variola, eczema (palmar), lichen scrofulosum, gumma, pityriasis rubrapilaris, furunculosis, peritosis. pilaris, lichen spinulosis, yaws, impetigo contagiosa, granuloma annulare, acne necroticans, macular-anesthetic leprosy, pityriasis lichenodes chronica.

There are likewise the following diseases which are often confused with syphilitic alopecia: alopecia areata, lupus erythematosus and leprosy. In case of the last named, loss of hair on eyebrows, pubis, axillae and body, as well as the scalp, should be looked for.

It is not contended that the skin lesions of acne vulgaris and scabies should always be confused with secondary syphilitic skin rash. However, they frequently present a close resemblance, and a careful history-taking, repeated observation and serology are absolutely necessary, because in no field of medicine is the average physician less skilled than in dermatology. In either early or late syphilis, the plantar and palmar syphilides are easily confused with psoriasis, dermaphotosis (ringworm) and eczema, and must of necessity exhaust all the physician's research armamentarium. Hence, a serology is wisest.

Dr. Earl Moore, in his writing on the diagnosis of syphilis, lists 23 oral or mouth lesions which may resemble early and secondary syphilis. These are as follows: trauma from lip biting, simple pharyngitis, streptococcal angina, diphtheria, acute follicular and chronic tonsillitis, trauma (silver nitrate burns), leukoplakia, Vincent's angina, aphthous, stomatitis, geographical tongue, Fordyce's disease, erythema multiforme, pemphigus, lichen planus (split lip), tuberculosis, herpes labialis, neoplasm (tonsil), agranulocitic angina, mercurial and bismuth stomatitis, periadenitis mucosa necrotia.

Dr. Moore also named sixteen diseases of the extra genitalia resembling mucous and skin lesions of early and secondary syphilis, to-wit: herpes progenitalis, chancroid, erosive vulvitis or balanitis, anal fissure, erythema multiforme, aphthous ulcers, venereal warts, trauma, carcinoma, pemphigus, granuloma inguinale, lymphopathia venereum, tuberculosis, scabies, lichen planus and hemorrhoids.

Here again serology is our sheet anchor as a guide in differentiation and elimination. A papulo-erosive lesion has been known to elude the laryngologists, when many times the patient has run the gauntlet of general practitioners, when a serology would have answered the problem. Any patient with any of these lesions that have not healed in ten days should be stripped for a close and diligent study and serology repeated at weekly intervals until it is proved not to be syphilis.

Eye and ear diseases caused by syphilis are, fortunately, almost universally referred to the specialist by the average general practitioner, as are also most bone and joint diseases. However, I cannot reconcile myself to the belief that the responsibility for the correct diagnosis of syphilis is any way lessened by this consultation on the part of the general practitioner, who occupies a position in the front-line trench, not only in this, but in practically all other diseases.

The skin lesions of early syphilis are often inconspicuous and we frequently hear a patient deny that he or she has a skin rash. Yet, when the patient is stripped and examined under a good light, we find a definite macular eruption, as secondary syphilitic rashes are more frequently macular, papular or papulopustular, or are more than one variety of papule. A history of genital or mucosal lesions, or both, will greatly assist and make apparent the absolute necessity of evaluating these lesions, which usually have an associated general lymphatic glandular enlargement.

In examining a suspected patient, and almost all physicians are more or less well versed in the rudiments of dermatologic diagnosis, one should make an inspection of the mouth, throat, palms of the hands, soles of the feet, scrotum or vulva and anus. and palpate enlarged and endurated lymph nodes; in any event, whether or not these and other characteristic symptoms or signs are pronounced, a serology should be done. Complete examination often reveals unsuspected lesions of syphilis, including one or more of its many complications, such as affections of the cardiovascular system, central nervous system, liver, kidneys and other vital organs, and brings to light other coexisting diseases such as tuberculosis, rheumatic heart disease and nephritis.

In an article of this nature, no detailed description of the various stages of syphilis can be attempted, and a discussion of syphilis of pregnancy, latent and congenital, with its varied and tragic complications and extremely serious and often fatal sequelae, must be omitted entirely.

Operators of the Chinese telephone exchange in San Francisco, Calif., that gives service to Chinatown residents, are required to know English, five different Chinese dialects and to memorize the numbers of 2,300 subscribers.

Birth Injuries*

R. F. MAYER, M.D.
INDIANOLA, MISS.

IN THE Mississippi Delta where the Negro population and incidence of syphilis are high, and the practice of midwifery common, birth injuries resulting usually in death of the infant are frequent. No statistics of any value are available to illustrate this statement because a physician does not see the infant and the cause of death on the death certificate is given as unknown—infant lived only a few minutes, or a few hours as the case might be. The various health departments are striving to improve this factor by conducting antepartum and postpartum conferences and by home visits to the newborn infants, plus supervision of the midwives, and hoping for a better arrangement in the future.

In spite of our efforts, the midwife is a grave local problem in neonatal mortality. However, since physicians have no part in such cases, this paper will deal only with those patients who are under the care of legal practitioners of medicine.

The term birth injury means any damage to a baby as a result of all or any of the mechanical factors concerned in the progress of labor. Any portion of the body may be and has been damaged. Montgomery[1] states that from an anatomical physiological consideration one is forced into the conclusion that birth injuries are mostly due to trauma and rarely to asphyxia as some workers believe.

Andrews[2] calls the attention of the medical profession to the fact that in spite of the great reduction in infant mortality within the past ten years, there has been practically no reduction in the mortality rate of the infant during the first month of life. Since injuries resulting from birth or asphyxiation during or immediately following delivery are responsible for a great many of the deaths in the first month of life, he seriously urges all physicians to make special efforts to minimize the occurrence of such complications.

In 1927 Frankel[3] reported an increase in infant mortality under one month of age and attributed his findings to the increased use of instruments in speeding up labor. Holland[4] thinks there has actually been no increase in infant mortality but that doctors as a whole have a better knowledge of birth injuries and are now signing death certificates with that diagnosis, whereas in the past some other cause of death was given. However, Holland states that he is not surprised by the absence of any reduction in the mortality rate because of the fact that women of today do not start having babies until at an older age than in the past, they demand shorter and more comfortable labors, which has resulted in over use of oxytoxics and anesthetics and there is a tendency towards abuse of forceps and labor inductions.

In 1936 Royster[5] published the fetal mortality figures from the Philadelphia Lying-In Hospital for the past six years. They showed that out of 12,000 births there were 800 fetal deaths with a general mortality of 6.8 per cent. First in cause was listed prematurity, accounting for 290 or 36 per cent of the 800 deaths. Third in cause came intracranial hemorrhage due to birth injuries, which was accredited with 65 or 8 per cent of the 800 fatalities. Simpson,[6] in 1926, went so far as to say that intracranial hemorrhage was responsible for at least 50 per cent of the deaths during the first few days of life. Twelve years later, in 1934, Bland[7] was still of the same opinion. Ford[8] concludes that at least one-third of all deaths occurring during the first two weeks of life are the result of birth injuries.

From the above statistics, even though they vary rather widely, it becomes apparent that birth injuries are an important factor in causing infant deaths and it behooves those of us of the medical profession to do all in our power to prevent such accidents. The very fact that so many birth injuries are preventable, if the conduct of labor is handled properly, lays the burden even more heavily upon our shoulders. We certainly cannot be held accountable for those things which we know not how to prevent, but we most surely are responsible for happenings that are preventable.

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*Read before the thirty-fifth semi-annual meeting of the Delta Medical Society, Greenwood, Miss.

Much has been said concerning infant mortality as a result of birth injuries. High as it is, we must not forget those infants who survive such injuries only to grow up and be crippled physically and mentally for the remainder of their lives. A conscientious physician needs only one such incidence to make him always do everything in his power to prevent repetition of a like mistake.

No attempt will be made in this paper to discuss the various factors that should be considered during pregnancy and the conducting of a delivery that would be least harmful to the mother and infant. That necessarily would consume more time than allotted for this discussion. The main purpose in presenting this paper is merely to stimulate interest of the general practitioner of medicine to such an extent that he will do everything in his power to prevent as many of the various birth injuries as possible.

Grouping the birth injuries according to the anatomical arrangement of the body, the writer has classified and will briefly discuss them as follows:

1. Superficial injuries like various skin abrasions, contusions, caput succedaneum and hematomata which are almost invariably the accompaniments of forceps delivery. Some think that such minor injuries should be ignored but there are others who are of the opinion that the infant's tissues are very susceptible to infections and they advise that strict aseptic care be given the lesions. Most workers are agreed that the subcutaneous hematomata and caput succedaneum are best treated by leaving alone. If the blood is withdrawn, it is apt to be rapidly replaced, whereas if left alone, absorption will occur within a period of a few days to a couple of weeks.

2. Muscle injuries are extremely common in forceps delivery and breech extractions. The sternomastoid muscle is the most common site of involvement in case of forceps delivery. There is often a temporary wryneck with a large, painful mass in the involved muscle. The muscle is stretched to such an extent by the force applied upon the forceps that some of the blood vessels are torn loose and in some cases there is actual rupture of the muscle sheath. Conservative treatment is sufficient in most cases. Occasionally the neck has to be opened. the mass removed, the leaking vessels ligated and the sheath of the muscle sutured.

3. Skeletal system injuries including fractures and dislocations. Of these two, fracture is the most common and occurs most frequently in the following bones: clavicle, humerus, femur and skull. Hartshorn[9] stresses the importance of x-ray in diagnosing these fractures because otherwise they are unnoticed until later in life and some deformity has resulted.

Sometimes fracture of the clavicle is accidental during a difficult delivery while in other cases it is done purposely in order to facilitate the delivery of a shoulder. Such fractures usually respond to simple immobilization of the affected arm in the abducted and externally rotated position for a few weeks. Not infrequently a fracture of the humerus is obtained in attempting to deliver the arm, especially in breech presentations. The most common sign is a wrist-drop due to an associated injury of the radial nerve. Such cases are best treated by application of simple splints which result in healing of the bone and nerve injuries in a couple of weeks.

Fractures of the femur are somewhat less frequent but do occur frequently enough to be of concern. They occur most frequently when a version is done or there is an attempt to bring down a foot. The main factor to keep in mind when treating such a case is to splint the thigh so as to prevent antero-posterior bending. Immobilization in such a manner for a few weeks is sufficient treatment in most cases.

Fractures of the skull are rare because of the great malleability of the bones of the head. When they do occur, they are usually of the fissured type and are evidenced by an irregular, soft, mushy cranial hematoma. In such cases surgical elevation of the depressed fragments is the treatment of choice.

Fractures of the lower jaw occur occasionally as a result of too vigorous an attempt to deliver the after-coming head. Such fractures must be handled with great care as they may result in deformity of the face.

Dislocations are rare, but when they do occur the most common sites are: lower epiphysis of the femur and the jaw. The dislocation of the lower epiphysis of the humerus is the only one of any significance. It is generally caused by forcible traction on the arm during a breech delivery. The signs of such a condition are limitation of motion and crepitation upon flexing the arm. X-ray findings are of no value until about the twelfth day when a new center of ossification can be seen. No treatment is needed as a rule in these conditions since the lesion is usually taken care of by nature.

4. Peripheral nervous system injuries are even of more importance than the skeletal injuries, especially in so far as later life is concerned. The two most common of the peripheral nerve injuries are:

a.) Erb's palsy, which is the result of brachial plexus injury. This condition is generally caused by too forcible traction upon the arm, resulting in stretching, tearing or hematoma formation of part or all of the brachial plexus. Such a lesion is manifested by temporary weakness or permanent flaccid paralysis of the affected arm. Ehrenfest[10] observed that frequently there is also damage to the phrenic nerve, which results in paralysis of the diaphragm on the affected side plus the other signs of involvement of the brachial plexus. There follows paradoxical movements of the diaphragm with difficult respiration which is sometimes mistaken for pneumonia or pleurisy unless viewed under the fluoroscope. The treatment of the brachial or Erb's palsy consists essentially of immobilization of the arm at right angles to the body with the forearm hanging down in the vertical position. The prognosis and duration of treatment depend upon the original extent of the lesion. Some neurosurgeons believe that if function has not been restored by the end of the first year, an exploratory operation should be done and an attempt made at relieving any adhesions and reconstruction of the nerve sheath and its fibers.

b.) Bell's palsy, which is usually the result of pressure from forceps over the facial nerve at its exit from the stylomastoid foramen. Due to the fact that the obstetrician rarely applies the blades of the forceps exactly symmetrically, the condition is usually unilateral. The facial nerve paralysis generally disappears spontaneously after a week or two and its presence causes no particular ill-effects since the baby does its sucking with the tongue.

5. Central nervous system injuries are the most common and serious of all the birth injuries. They are classified into two general groups as follows:

a.) Intracranial injuries. As already stated, intracranial hemorrhage accounts for about 8 to 10 per cent of all fetal deaths. Some of its causes are:

Prolonged labor as a result of a narrow pelvis, tight perineum, large head, etc;

Forceps applied incorrectly and upon which too forcible traction is made;

Delivery of the after-coming fetal head in breeches and versions when the head is not given sufficient time to dilate the birth canal;

Prematurity, which predisposes to a tendency to bleed. The vessels of the brain are more fragile than those of the full-term baby;

Improper administration of posterior pituitary hormone prior to delivery causing severe uterine contractions that might result in rupture of the uterus, or violent forcing of the head through the perineum thereby causing intracranial hemorrhage;

Bundesen et al[12] feel that syphilis in the mother predisposes to prematurity and weak blood vessels and is a factor in causing intracranial hemorrhages;

Hereditary defects as seen occasionally in a normal healthy woman who has had a short easy labor and given birth to an apparently normal full-term baby that has intracranial hemorrhage. Anderson[11] cites a case of this type that was delivered by an elective Caesarean section and had no possible chance to injure its head.

The most common sites of hemorrhage are in the region of the tentorium cerebelli and the falx cerebri. The structures are torn and the associated venous sinuses and blood vessels ruptured. The condition is rather easily recognized, usually being first indicated by difficulty in resuscitation of the infant after the cord has been clamped and severed. When respiration is finally established, it is very irregular and generally there are intermittent attacks of cyanosis. The baby appears to be highly irritable, going into brief spasms if disturbed. The breast is refused because of inability to carry out the necessary maneuvers. Blood in the spinal fluid, provided the puncture is done correctly, plus the above findings is pathognomonic of the condition.

Intracranial hemorrhage is treated by giving blood intramuscularly before taking the infant from the delivery room if labor has been long and difficult, in an effort to increase the coagulating constituents of the baby's blood. Then the infant should be put in a quiet place, given sedatives, and handled as little as possible. Oxygen may have to be given during the attacks of cyanosis. If convulsions set in and the attacks of cyanosis become more frequent, cisterna magna puncture and drainage of the spinal fluid is indicated. Dam et al[13] think that a slight bleeding tendency in the newborn is common and that it is the result of low prothrombin level which can be raised by giving vitamin K. Some men advocate the giving of hypertonic solutions intravenously in an effort to dehydrate the edematous brain. As a whole the prognosis is poor, both immediately and later. According to Munro[14] the most common late result is hydrocephalus associated with either epilepsy or idiocy. Roberts[15] states that about 85 per cent of all babies who fail to survive the initial shock of intracranial hemorrhage die within the first three days of life. He feels that of the infants who survive the initial shock of birth injury, approximately 75 per cent will develop normally.

b.) Spinal Injuries. These are rather infrequent but are seen occasionally after a version and breech extraction because of dystocia. The cervical vertebrae are the most common site of involvement and the lesion may consist of tearing loose the spinal nerves from the cord in that region or actual severance of the spinal cord. The latter group never survive. Those cases in which there was only partial separation of the limb nerves from the spinal cord may gradually gain function, but if they haven't by the fourth month, most neurologists are agreed that some sort of repair should be attempted.

6. Intra-abdominal injuries are rare since delivery of the infant's body is usually not very difficult. The most common lesion is hemorrhage of the liver, spleen, kidneys, and supra-renal glands. The symptoms are generally present in such cases. The baby usually dies within the first twenty-four hours of life. Some of the above mentioned injuries are sometimes produced after the baby has been delivered by too vigorous attempts at artificial respiration.

7. Those very unusual injuries like damage to the eye, mouth, anus or vagina by the attendant who mistakes the above mentioned parts for an undilated cervix and in turn proceeds to dilate manually.

The writer has attempted to enumerate and briefly discuss the various birth injuries. This subject is of greater importance than is ordinarily thought and should be of extreme interest, especially to the obstetrician and pediatrician, since it is these two branches of medicine that are so vitally concerned with the newborn infant. Wheeler[16] states that a survey of the institutions for cripples and mentally deficients in Kansas revealed that 20 to 25 per cent of their inmates were there because of birth injuries. Hinkle[17] admits that birth injuries are responsible for many of the mentally defectives in the world today but he is of the opinion that the lay people and other members of the medical profession place too much blame upon the obstetrician and pediatrician for such condition. Whatever the case may be, all of us should be willing to admit that the number of such undesirable complications could be materially reduced if those of us concerned with the antepartum care, delivery and neonatal care of infants would keep alert for danger signs and of everything in our power to prevent harm to the mother or infant.

REFERENCES

1. Montgomery, J. C.: Birth Injuries From Standpoint of Pediatricians, J. Michigan M. Soc. 29: 634-637, 1930.
2. Andrews, H. S.: Birth Injuries, Kentucky M.J., 35: 245?247, May, 1937.
3. Frankel, L. K.: Infant Mortality, Am. J. Pub. Health, 17: 1209, 1927.
4. Holland, E.: Injuries In Relation to Labor, Am. J. Obst. and Gynec., 33: 1-18, Jan. 1937.
5. Royster, H. A., Jr.: Birth Injuries, South. Med. and Surg. 98: 633-636, Dec., 1936.
6. Simpson, W. E.: Intracranial Hemorrhage of Newborn, J South Carolina M. Ass'n., 22 65-68. 1926.
7. Bland, P. B.: Fetal Injuries With Special Reference to Intracranial Lesions, N. England M. J., 211: 296-304, 1934.
8. Ford, F. R.: Disease of the Nervous System in Infancy, Childhood and Adolescence, Baltimore, Charles C. Thomas, 1937.
9. Hartshorn, W. M.: Birth Injuries, New York State J. Med., 37: 869-877, May, 1937.
10. Ehrenfest, H.: Birth Injuries of The Child. Nebraska M. J., 19: 313-316, 1934.
11 Anderson, A. F.: Management of Emergencies, S. Clin. North America, 17: 41-53, Feb., 1937.
12. Bundesen, N. H.; Fishbein, W. I.; Dahms, O. A. Potter, Edith L.; and Volke, Walter: Factors in Neonatal Deaths, J.A.M.A. 111: 134 (July 9) 1938.
13. Dam, H.; Tage-Hansen, E.; Plum, P.: Vitamin K. Lack in Normal and Sick Infants, Lancet 137: 1157-1161 (Dec. 2) 1939.
14. Munro, D.: Cranial and Intracranial Damage in the Newborn., Surg. Gynec and Obst. 47: 622-630, 1938.
15. Roberts, H. M.: Intracranial Hemorrhage In the Newborn, J.A.M.A. 113: 280-284 (July 22), 1939.
16. Wheeler, J.A.: Birth Injuries in the Newly Born, J. Kansas M. Soc. 34: 93-96, 1933.
17. Hinkle, S. B.: Birth Injuries. J. Arkansas M. Soc. 30: 77-82, 1933.

Treatment of Facial Injuries*

LAWRENCE L. BEALL, M.D.
CLEVELAND, MISSISSIPPI

THE TREATMENT of facial wounds is practically the same as in other parts of the body. The few exceptions will be enumerated later. The therapy of facial injuries resolves itself into the care, handling, and healing of wounds which is the real foundation of all surgery since the time of Hippocrates.

Facial injuries are all too frequently associated with other serious intracranial and abdominal injuries, and consequently each case will be a separate and distinct problem. The first consideration is the saving of life; the second is the ultimate restoration of function; and the cosmetic consideration is third and last.

The four surgical principles in the treatment of any traumatic wound must be met by: 1) checking hemorrhage; 2) treating shock; 3) conversion of the dirty wound into a clean one; 4) putting affected part at rest and restoring the greatest possible degree of usefulness.

HEMORRHAGE. The rich blood supply to the face necessitates a careful and thorough hemostasis. The depths of the wound should be exposed gently by means of hooks or towel clips and bleeders caught with mosquito clamps, taking time and care not to take too big a bite.

SHOCK. This can be combatted with morphine and parenteral fluids. Plasma and blood transfusions can be given if necessary even while the facial wounds are being repaired.

CONVERTING A DIRTY WOUND INTO A CLEAN ONE. A sterile sponge saturated with stainless merthiolate is used to cover the wound, then the surrounding skin is thoroughly cleaned with soap and water, alcohol and ether, and painted with tincture of merthiolate up to the wound edge, but not into the wound. The wound itself is then thoroughly lavaged with soap and water. Plain water or saline is used and a steady stream played into the wound during this procedure. (A sterile enema can with attached rubber hose is satisfactory equipment). If grease or oil is a contaminant I do not hesitate to sponge out the wound thoroughly with ether.

REST. The wound should be put at rest just as much as a fractured bone. After all, a laceration of the skin is a fracture of the skin; and if one remembers this, better healing will result.

Von Wedel's classification is thorough, simple and easy to remember. All facial injuries can be placed in one or two of the following types: 1. simple lacerations, 2. destruction of skin, with or without staining, 3. burns, 4. compound injuries associated with bone fractures.

SIMPLE LACERATIONS. After a thorough cleanup as recounted, a 2% metycaine solution with ten drops of adrenalin to the ounce is used as a local or block anesthesia. This can be used in the majority of these cases and even in children if their confidence is first gained and they realize you are not going to hurt them. Thorough cleaning is done again. Because of the good blood supply in this region, many parts that look devitalized can be saved. Complete hemostasis must be obtained. Then the cut edges are approximated without tension using either fine black silk or horse hair sutures. I use Deknatel C on a fine non-cutting intestinal needle. If the subcutaneous tissues are incised or torn they should be closed gently so that no dead spaces will be left. The suture material should be very fine silk. The secret of leaving no scars will be the accurate apposition of the structures beneath the skin. Either interrupted sutures can be used or a subcuticular stitch. Rolling in of the skin edges can be controlled by under-cutting the skin edges or using a vertical-on-end mattress suture. If only the epidermis or part of the corium is fractured the separation can be repaired by using small strips of flamed adhesive or elastic adhesive (elastoplast). This method causes much less trauma than suturing. Dressings should be scanty. None is perferable, but if one must be put on, it should be no more than two or three thicknesses of gauze fixed with small strips of adhesive at the margin. The skin needs air for life, and especially so during the reparative process. How many times do we see wounds of the face completely covered with adhesive! I remember a few years ago a story I read that made a profound impression on me. This story was of a little boy dressed up to represent Cupid in a big pageant. His entire skin surface was covered with gold leaf and gold paint. He made a beautiful figure, but to the amazement of all the boy died.

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*Read before the thirty-eighth semi-annual meeting of the Delta Medical Society, Greenville, Miss., October 8, 1941.

In the after care of these cases tetanus is always given, and in some cases tetanus-gas-gangrene serum is given if it is thought necessary. All sutures are removed on the third day. The scab or fibrinous exudate is than loosened with sterile cold cream or vaseline on a sterile swab. This softens and lessens the scar.

DESTRUCTION OF THE SKIN WITH OR WITHOUT STAINING WITH FOREIGN MATERIALS. After thorough cleansing, devitalized shreds should be cut away. Débridement should be done very sparingly and carefully. All undoubtedly irremediably damaged tissue should be removed. None of the eyelid should be removed. If the injury is close to the eye, the cornea is protected by the instillation of boric acid ointment. Avulsed wounds should be grafted immediately; donor site can be the inner surface of the upper arm. The graft should be held in place with a few interrupted sutures and a pressure dressing.

BURNS. Small ones are cleansed with white soap and water, then covered lightly with butesin-picrate ointment, and a dry dressing applied. The more extensive ones are treated according to Bettman's method, the application of fresh 5% tannic acid followed by 10% silver nitrate and heat. The area treated must be kept absolutely dry for optimum results. This leaves little if any scar. I have had no experience with sulfadiazine powder used as a spray.

COMPOUND INJURIES OF THE FACE. In the treatment of these great care must be exercised, because of other serious trauma, especially severe cerebral injuries and other compound fractures. Up to the present time I have omitted the time factor involved because as a usual thing surgeons see these cases early, within the first six hours. The reason for this is no doubt the free bleeding of these wounds, and the inability of the average layman to check hemorrhage. Even a small amount of blood smeared over the face and clothes is an alarming and dangerous condition to most persons. The free bleeding really does good in some cases, as some of the débris is thus washed out.

If other injuries are as severe or worse than those about the face, they should be treated first. If the shock is severe and the prognosis grave, all bleeders are caught and tied and a wet stainless merthiolate or saturated boric acid solution is applied and held in place with loose bandages, and the repair is delayed several hours. During the interval intensive supportive treatment can be administered. In a few hours the outcome can be prognosticated a little better and then further reparative procedures undertaken as indicated. When concomitant fractures of the bones of the face occur they must be handled gently in the clean-up and gallons of saline, if need be, used to assure thorough cleanliness. A block anesthesia of the second and third divisions of the fifth cranial nerve can be done if the injury is very extensive. A general anesthetic may be required.

All loose bones should be carefully saved and replaced. The loss of bone will change the features a great deal, hence every effort should be taken to utilize them as grafts if possible. The closure of the soft parts over the fragments will hold them in place usually.

In complicated and very irregular tears it will be hard to figure out where to start suturing. Both sides of the face should be examined and compared before and afterwards. A known point is selected such as the nostril border, the edge of the eyebrow, or the vermilion border of the lip. The rents can be bisected with each interrupted suture and the closure thus facilitated.

The full consideration of fractures of the facial bones does not come within the scope of this paper, but this subject may be covered very briefly under the following divisions:

MALAR (zygoma). If this is displaced it can be replaced by a small incision in the sulcus of the mouth and a Kelly forcep or periosteal elevator pushed through to force the fragments back into position.

MAXILLA. These fractures can be held in alignment by a wire brace or a dental impression tray filled with Kerr's compound which is fixed to a rigid plaster head dressing.

NASAL BONES. The airway is cleansed by suction and a cocaine swab inserted inside the nose. The fragments are realigned with a uterine sound or a clamp. If the overlying soft parts fail to hold the fragments in position, overlying lead plates on the outside are used. These are fixed with fine gauze silver wire. They are replaced in a week's time with a Joseph clamp.

MANDIBLE. Breaks through the lower jaw are easily handled by wiring to the upper jaw in absolute dental occlusion.

In conclusion, it must be remembered that every patient, no matter how little or severely damaged, is a separate individual. The medical side always needs investigation. One may be a diabetic, a nephritic, or have generalized arteriosclerosis. In such cases the convalescence will be accordingly altered.

One should not overlook the fact that the final result will be determined not only by the skill and judgment of the surgeon, but by the general condition of the patient.

BIBLIOGRAPHY

1. Anderson, D.P. The Problem of Wound Healing Ann. Surg. 108;918 (Nov.) 1938.
2. Bancroft, Frederick W. Treatment of Traumas of Skin and Subcutaneous Tissues. S.G.O. 72; N 2 A 318, Feb. 1941.
3. Bettman, Adalbert G. Tannis Acid and Silver Nitrate in Burns S.G.O. 62; 458 (Feb.) 1936, 2) Personal Communication to Author.
4. Brown, J. B. Fractures of the Bones of the Face. S.G.O. 68. N.2. A.564. S.M.J. 32;136 (Feb.) 1939.
5. Douglas, Beverly, Advances in the Treatment of Everyday Wounds. S.M.J. 32;117, Dec. 1939.
6. Fantus, Benard: The Therapy of the Cook County Hospital. Therapy of Fresh Accidental Wounds. J.A.M.A. 103; 108 (July) 1934.
7. Forbus, Wiley D. Variations in Morphologic Reaction to Injury; S.M.J. 32:1208 Dec. 1939.
8. Gray's Anatomy: Twenty-first edition, Philadelphia: Lea and Febiger, 1934.
9. Howes, Edward L. A Renaissance of Suture Technique Needed, Am. J. Surg. XLVII: N.3; June 1940
10. Von Wedel, Curt: The Role of Plastic Surgery in Injuries of the Face. S.M.J. 32; 1118, Nov. 1939.

Recently when French Minister M. Chataignau of Vichy had to call a doctor to relieve stomach misery, only two doctors were available—one British, one German. He called the British doctor. The German legation protested the slight to Berlin, and Vichy ordered Chataignau to apologize.

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EDITORS:

LAWRENCE W. LONG, M.D.

S. A. Hill, M.D. L. V. Rush, M.D.

Manuscripts and material for publication under the Mississippi State Medical Association should be received not later than the twentieth of the month preceding publication. Address material to Lawrence W. Long, M.D., Suite 412 Standard Life Building, Jackson, Mississippi.

THE STATE MEDICAL MEETING

The Robert E. Lee Hotel has been selected for the meeting place of the State Medical Association to assemble in its annual convention on May 12, 13 and 14, 1942.

Great plans are going forward for the meeting and arrangement of the meeting place. The Central Medical Society as host, has designated the Committee on Arrangements of which Lawrence Long is general chairman, with H. F. Garrison, Sr., as the honorary general chairman. The committee is working to aid in making this program the best arranged that the state has put on. Your coöperation and suggestions will be appreciated by the chairman at any time. Please take note that you should write Dr. R. B. McLean, 910 North State Street, Jackson, Mississippi, if you desire to display a scientific exhibit. Commerical exhibits are in charge of the State Medical Association with Dr. D. W. Jones, Standard Life Building, Jackson, Miss., in charge.

The list of the Committee on Arrangements follows:

General Chairman—Lawrence W. Long.

Honorary General Chairman—H. F. Garrison, Sr.

Ex-Officio Member—L. B. Austin, President.

Vice-General Chairmen: Robin Harris, W. R. Bethea, A. G. Wilde.

Honorary Vice-General Chairmen: J. W. Barksdale, W. B. Dodson, Hardie Hays, C. F. McKenzie, S. H. McLean, L. B. Neal, G. W. F. Rembert, H. R. Shands, F. J. Underwood, F. L. Van Alstine, J. C. Walker, J. P. Wall, Willis Walley, N. C. Womack.

Secretary: J. G. Thompson.

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Finance: D. W. Jones, Chairman; A. L. Gray, C. M. Speck.

Program: T. H. Blake, Chairman; Fred Hollowell, Charles Ward, R. N. Whitfield, L. Q. Hall, Leonard Wright.

Entertainment: H. C. Ricks, Chairman; Temple Ainsworth, G. C. Verner, A. G. Ward, J. O. Segura.

Membership: H. C. Sheffield, Chairman; H. F. Magee, W. H. Simmons, M. L. Batson, R. T. Stephenson.

Hotels: G. C. Russell, Chairman; I. C. Huggins, Lee Lipscomb, D. V. Galloway, J. C. Henthorne.

Radio: H. F. Garrison, Jr., Chairman; P. R. Greaves, S. J. Hooper, M. J. Dugger, S. S. McNair, W. E. Nohlin, Sr.

Publicity: A. E. Gordin, Chairman; B. C. Edwards, J. S. McIntosh, F. E. Werkheiser, N. C. House, D. T. Brock.

Alumni Reunion: O. A. Schmid, Chairman; J. A. Chustz, Lee Clark, G. E. Riley, Smythe Howard, B. N. Walker.

Luncheons: J. W. Lipscomb, Chairman; R. E. Anderson, J. G. Blaine, L. T. Carl, T. W. Kemmerer, J. T. Weeks.

Scientific Exhibits: R. B. McLean, Chairman; Brister Ware, J. S. Harter, R. C. O'Ferrall.

Hobbies, including golf, shooting, fishing: G. E. Adkins, Chairman; J. F. Armstrong, V. D. Hagaman, T. M. Moore.

Information: J. A. Milne, Chairman; J. G. Dees, H. B. Cottrell, F. E. Rehfeldt, Cecil Walley.

Transportation: W. L. Hughes, Chairman; L. S. Meriwether, George Owens, W. H. Hall, B. J. Marshall.

Ladies' Entertainment: Mrs. W. L. Hughes, Chairman; Dr. Maud Gordes, Dr. Estelle Magiera.

To any one who is willing to look and can see, there is a very definite relation between the consumption of alcohol and defense—and victory. The labor problem has been and is very serious, but the consumption of alcohol is probably a greater hindrance to victory than the labor racket. The medical profession in its onward march for preventive medicine has a big responsibility in relation to our alcohol problem. Our total health assets need to be increased in the interest of defense and victory. The medical profession would do well to set the example for complete abstinence from alcohol as a beverage for the duration of the war at least, do it for the sake of economy, and physical and mental efficiency. One half of the accidental deaths on the highways can be charged to alcohol, so can fifty per cent of venereal disease, murders and suicides. No doubt whisky played its part at Pearl Harbor. Recent investigation in a factory of 418 employees, 2692 working days in one year were lost because of drinking or seven and a half years for one man. The whisky bill, the cost for the raw material, is about seven billion dollars annually in the United States. The crime bill is fifteen billion dollars. At every turn of the corner the Allies have been too slow. Whisky slows mental activity and lowers the physical reserves. And the cost of whisky consumption in real patriotic, victorious enthusiasm is so great that it cannot even be estimated, and great enough that it might mean defeat. If we are to win victory and retain a democracy, we must be inspired by the love of freedom of mind, soul and body, not be a slave to the elixir of corn. The medical profession should put every dollar possible in victory bonds, not in "bonded bottles." At the present rate of consumption victory will be much slower to obtain and impossible to hold. Let the medical profession abstain from the alcoholic dregs of defeat and drink freely of the elixir of liberty which flows freely from the heart of the Man of Galilee.

In order to give our readers something easy to understand and entirely dependable we asked Dr. Oscar Bethea, Professor of Clinical Medicine, Tulane University, New Orleans, to epitomize the values of the sulfonamides. Dr. Bethea is a very careful clinical observer and he is practical in his applications. We are sure our readers will appreciate his paper on this subject at this time.

The people of Mississippi generally are gradually becoming more interested in hospital insurance. Most likely the interest will continue to grow provided the cash income to the family can be raised. Hospital insurance should help to solve our problem of service to the sick. Some hospitals have written insurance on their own initiative. A number of companies have taken a fling at writing for the individual hospital as well as a policy that would permit the patient to enter any hospital. Our state hospital association has been actively behind hospital insurance and has made provision for a policy that is good in any approved hospital in the state. Hospital insurance we think should be a democratic policy good in any hospital for a given expense. It is time for both the people and the doctors to think of what is happening in the field of hospital insurance. For a large hospital in an adjoining city to push insurance in our state good only in that hospital serves to complicate our medical service problem all the more. In north Mississippi we are sure it is becoming pretty serious. The cream of the crop in ability to pay takes this insurance out of the state. Our hospitals in the state are doing their dead level best to take care of the people, charity and pay, but many pay patients are going where they have their insurance. If the charity patient from Mississippi tries to get service in the big city it is not so easy, and if he does he takes not the doctor he wants, but the one the hospital sees fit to give him. This is not democratic, but more on a par with the zoning practiced by a few hospitals. It is time for us to think straight around the circle of hospital insurance and it is time for us to be very fair and coöperative with each other.

We are very grateful to the fifty doctors from eleven different states who have renewed their subscriptions to *The Mississippi Doctor* the past month. We feel very proud that we have so many doctors from many different states who continue to subscribe for our journal once they have had it for a year.

Articles or notices for the May issue should be sent in at once.

The death of Mrs. R. H. Christian, who was killed in the tornado which swept the town of Baldwyn March 16, is widely lamented in north Mississippi. The wife of one of our fine young doctors, she had contributed much to his work to their community and to the lives of doctors' wives through the auxiliary. She was an able past-president of both the Four-County Auxiliary and the Northeast Mississippi Thirteen Counties Auxiliary, and her warm personality endeared her to the many who knew her. She was also active in club and church circles in Baldwyn, where she had grown up. Before her marriage to Dr. Christian she was Miss Louise Rutherford, daughter of Mr. and Mrs. W. J. Rutherford of that place. She left two small sons, Jack and Bob Christian.

The heartfelt sympathy of the medical fraternity and of this journal is extended Dr. Christian in his great loss.

If you have practiced for fifty years in Mississippi, please write to Dr. R. N. Whitfield, Mississippi State Board of Health, and tell him about yourself, your work and your medical philosophy, and send him a picture. We want to see you in the *Mississippi Doctor*. Dr. Whitfield has very kindly consented to help us in this effort to recognize veteran practitioners.

Dr. J. C. Culley is the very efficient president of the Mississippi State Hospital Association which will hold its session May 11, the day before the State Medical Association, in Jackson. He has operated one of the most efficient small hospitals in the nation for a number of years. He has put himself and his money into this institution that it might serve well the people of his territory. The doctors who have put their own money in an institution for service to the public deserve much credit. Dr. Culley served ably as president of the Mississippi State Medical Association and we are sure he will give us a fine program at the annual meeting this year.

April is cancer month in Mississippi. Be sure to read Dr. Stingily's paper in this issue of the journal on the subject. He has done some fine work on the cancer program and Meridian has not lagged. Much cancer education has been done in our state for the last few years. We need to do more. We must keep up the fight. The education of the laity is of the greatest importance. Although early diagnosis and early treatment are our greatest weapons, heredity and better hygiene must be kept in mind while we search the future for a final solution. We have non-blight pear trees, we might sometime have non-cancer people. The patient that is under par some way is the one in whom may be expected cancer. The most practical need right now in Mississippi is for every practitioner to have a trained nurse to work in his office so that he may properly examine every patient and so that he and the nurse together may help each patient to become cancer-conscious.

Truly has it been said that no one knows what a day may bring forth. But one thing we do know, that is the law of nature. Either progress or recession is imperative. It is true that there may appear to be an intervening period of stagnation, but this period is only the line of demarcation between the two. As the tides flow out and then return, so it is in human affairs.

For a number of years I have felt that world revolution is imminent. Nothing was settled by World War I. The powers engaged in that conflict simply became weary and agreed to rest for a time. Only the so-called democracies were blind to the signs of the times. The great Russian bear had been hibernating for ages. It was aroused from its long winter sleep by the other war. National revolution with its attendant fratricidal blood-shed marked a real "birth of a nation." The controlling idea there was communistic. Plutocracy had long prevailed and the masses had been denied all privileges and opportunities for personal advancement. When weapons were placed in their hands and they were ordered to fight for the old order, they rebelled. They realized that the "hour of jubilee" had come. Every vestige of the old order was "eliminated." In Germany it was different. There the masses were educated, but educated to believe that they were a superior race. The conflict was international in their conception. The world was to be dominated even if other nationalities must be exterminated. Hitler is but the personification of German ideals. He did not discover Germany—Germany discovered him. Even so he was anathema to the ruling classes at that time. The fact that he was jailed only served to draw the masses to him. He overthrew the old German government just as completely and as effectively as that of Russia had been overthrown, only fratricidal blood was shed. But the capitalistic system was destroyed and a socialistic system was substituted. There is an irreconcilable difference between communism and socialism. Both of these are equally displeasing to the so-called democratic nation. In fact, there is less in common between them and the Russian policies than there is between them and German policies. However, the idea that Germans are a superior race makes it imperative that Hitlerism must be wiped out; we will never acknowledge our inferiority to any race of men. It is a war to the death in which we are engaged. This being true we can and must tolerate the Russian alliance until our own great danger shall have been dispelled. In the meantime we must realize that tremendous change is taking place with us. Socialism of a kind is inevitable, in fact, it has already come. After the war is over all things will be different. If we do not survive, only chaos and darkness lie out before us. Then it will be too late to exclaim "give me liberty or give me death." We are not fighting to *obtain* liberty but to *retain* it, possibly to *regain* it. This is an all-out war; we must all fight or all die. The man who expects to make money out of this war is a traitor and as such should be shot at *sunset,* not at *sunrise.* He does not deserve to live through the night. If we expect to win this war, we must forego all personal liberty for the duration, at least. Forty thousand doctors must be taken into military service. Some of these will give their lives. Those who do not go into military service must do duty as hard and strenuous behind the firing lines. Many of these, mostly aging men, will die, too, because of overwork and worry. Any young doctor who asks deferment should be ostracised. He is not worthy the respect of his peers. Through the smoke and uncertainty of war, the spectre of state medicine looms. We can only wait and hope for the future of our loved profession.

—G. S. B.

News and Comments

PROGRAM
THIRTEENTH ANNUAL MEETING
MISSISSIPPI STATE HOSPITAL ASS'N.

Heidelberg Hotel, Jackson

MORNING

8:00 a.m. Registration—Hotel Lobby.

9:00 a.m. First Session,—Dr. John C. Culley, President, Presiding.

Business
President's Address
Reports

AFTERNOON

2:00 p.m. Second Session—John C. Culley, M.D., President, Presiding.

WAR AND HOSPITALS—Panel Discussion

A. J. Hockett, M.D., Superintendent, Touro Infirmary, New Orleans, Leader.

(Ten minutes will be allowed for presentation of each subject and five minutes for general discussion).

1. *Organization of the Hospital for Civilian Defense*—Oliver P. Daly, M.D., Director, Charity Hospital of Louisiana, New Orleans.
2. *The Procurement and Assignment Service and the Hospital*—T. M. Dye, M.D., Chairman for Mississippi, Procurement and Assignment Service, Clarksdale.
3. *Priorities and the Problem of Obtaining Hospital Equipment, Furnishing and Supplies Essential to Rendering Adequate Services to the Patient*—R. S. McCoy, Vicksburg Infirmary, Vicksburg.
4. *Maintaining Adequate Professional and Non-Professional Personnel for Our Hospitals During Enlistment in the Military Services and Industrial Expansion*—Miss Helen Branham, R.N., North Mississippi Community Hospital, Tupelo.
5. *Maintaining Standards of Hospital Service During the War*—J. C. Senthorne, M.D., Mississippi Baptist Hospital, Jackson.
6. *Meeting the Increasing Costs of Hospital Service*—G. D. Stanley, King's Daughters Hospital, Greenville.
7. *Conserving During Wartime as Applying to Hospital Personnel, Labor, and Supplies of All Kinds*—Henry Boswell, M.D., Mississippi State Sanatorium, Sanatorium.
8. *Emergency Medical Unit*—Gilruth Darrington, M.D., King's Daughters Hospital, Yazoo City.

HOSPITALIZATION INSURANCE—Panel Discussion

J. Gould Gardner, M.D., Columbia Clinic Hospital, Columbia, Leader.

EVENING

6:45 p.m. Banquet—George E. Adkins, M.D., Jackson Infirmary, Jackson, Toastmaster.

ADDRESS—Hon. Walter Sillers, Rosedale.

Presentation of Certificates of Compliance with the Minimum Standards of the Mississippi State Hospital Association—F. S. Dixon, M.D., Chairman, Committee on Minimum Standards. Natchez Charity Hospital, Natchez.

Presentation of officers for 1942-1943—A. Street, M.D., President, Mississippi State Medical Association, Vicksburg.

DR. JEFFERSON C. PENNINGTON

President-Elect
of Mid-South Postgraduate Medical Assembly

Born and reared on an Alabama farm in Coosa County, Dr. Pennington came up somewhat in the Abraham Lincoln way. Working in a grocery store during high school, and teaching a year before entering college, he made his way through the University of Alabama in three years and in another year (1914) earned an M.A. degree in education, working during vacations in a saw mill, a livery stable, with a lawyer firm and collecting for a drug store. He was superintendent of the Sulligent, Ala., schools and then professor of psychology at Jamestown College, Jamestown, N. D., in the interim between college and enlistment for service in the World War in 1918. His active service in France over, he spent several months in study at Toulouse University, where he was given a certificate in French literature.

Dr. Pennington entered Vanderbilt University Medical School in 1919, helping along with his expenses by being bookkeeper and office assistant in the office of Drs. Hall and Hall. He was graduated with honors, president of his class, in 1923, and went to New York to interne at Peck Memorial Hospital, Brooklyn. For the next three years he was assistant resident and resident under Dr. Oswald S. Lowsley in James Buchanan Brady Urological Foundation of New York, and later ship surgeon on the United States Lines. Since 1927 he has practiced urology and urological surgery in Nashville.

Dr. Pennington has contributed many articles to the literature, one of the most outstanding of which is "The Female Urethra" published in the Oxford Loose Leaf Surgery. He is instructor of clinical urology at Vanderbilt Medical School. He also has many hospital connections with various Nashville hospitals. His honors have come deservedly. He served three years as secretary of the Urological Section, Southern Medical Association and one year as chairman. A past-president of Middle Tennessee Medical Association, the Nashville General Hospital Staff, now president of Southeastern Section of American Urological Association, he has also been a member of the house of delegates of Tennessee State Medical Association most of the time for the past fifteen years. His memberships in medical organizations are too numerous to mention.

He was married in 1924 to Dr. Edna Scott. There are three sons, Jeff C., Jr., Wm. Scott, and Thomas Guv.

Dr. Pennington has given much time to organized medicine. He is deeply devoted to the profession and puts himself into it with all the enthusiasm at his command. It is good to know him and claim as a friend a man who is so cordial and obliging. He will make a fine president of the Mid-South Postgraduate Medical Assembly. Worthy and well-qualified in every respect, the association will have his attention whenever and wherever needed.

Michael Reese Hospital cardiovascular department offers a full-time intensive course in electrocardiography for two weeks August 17 to August 29, 1942, by Dr. Louis N. Katz, director of cardiovascular research. Reservations may be made upon receipt of $10.00 which will be applied on the tuition. An hourly program of the course will be sent on request. Write to Michael Reese Hospital, 29th and Ellis Ave., Chicago, Ill.

MEDICAL EXAMINATION NOTICE

The Mississippi State Board of Health will hold examinations for license to practice medicine in the Robert E. Lee Hotel (Convention Hall), Jackson, Miss., on June 24 and 25, 1942. Promptly at eight o'clock. Examination fee $10.25.

DR. T. J. PENNEBAKER

Dr. T. J. Pennebaker, of Cotton Plant, Miss., is still on the firing lines of medicine after a little more than fifty years' practice in this same community. He was born in Tippah County March 25, 1859. He was married to Miss Virginia McBryde in 1891, and they have a son practicing in New Albany. He took his medical course at Tennessee Medical College.

He is a man of splendid native ability, well fitted in mind and heart as a physician. He drinks deep from the fountain of human philosophy. He is able in helping to construct and build personal health assets and he does his part to round out good citizenship in his community. In this time of great need of doctors in Mississippi he is not claiming exemption from service because of his more than fourscore years. The latest in medicine needs very badly much of what this type of practitioner has to offer.

COMING MEDICAL MEETINGS

Tennessee State Medical Association—Memphis, Tenn., April 14, 15, 16, Hotel Peabody.

American College of Physicians—St. Paul, Minn., April 20, 21, 22, 23, 24.

The twenty-sixth annual session of The American College of Physicians will be held at St. Paul, Minn., on April 20-24, 1942, general headquarters at the Municipal Auditorium.

Alabama State Medical Association—Montgomery, Ala., April 21, 22, 23, The Whitley Hotel.

Arkansas State Medical Association—Hot Springs, Ark., April 27, 28, 29, Arlington Hotel.

Ohio State Medical Association—Columbus, Ohio, April 28-30.

Georgia State Medical Association—Augusta, Ga., April 28, 29, 30 and May 1, Bon Air Hotel.

Mississippi State Medical Association—Jackson, Miss., May 12, 13, 14, Robert E. Lee Hotel.

American Medical Association — Atlantic City, June 8, 9, 10, 11, 12.

Southern Medical Association—Richmond, Va., November 9, 10, 11, 12.

LISTS OF ESSAYISTS

List of essayists for Mississippi State Medical Association which meets at the Robert E. Lee Hotel, Jackson, Miss., May 12, 13, 14.

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. A. J. Milne, Jackson, Chairman
Dr. T. Paul Haney, Laurel
Dr. Theodore A. Watters, New Orleans, La.
Dr. Lawrence W. Long and Dr. A. L. Gray, Jackson
Dr. Philip Lewin, Chicago, Ill.

SECTION ON SURGERY

Dr. Thos. H. Blake, Jackson, Chairman
Dr. Thomas R. Ramsay, Laurel
Dr. Edward Holmes, Winona
Dr. J. A. K. Birchett, Vicksburg
Dr. Albert Key, St. Louis, Mo.

SECTION ON EYE, EAR, NOSE AND THROAT

Dr. Alston Callahan, Atlanta, Ga., Chairman
Dr. W. R. Buffington, New Orleans
Dr. Van Dyke Hagaman, Jackson
Dr. D. E. Staton, Columbus
Dr. H. K. Rouse, Gulfport
Dr. Sam Carruthers, Grenada

SECTION ON MEDICINE

Dr. John G. Archer, Greenville, Chairman
Dr. Laurence Clark, Vicksburg
Dr. B. B. O'Mara, Biloxi
Dr. E. T. Ellison, Greenville
Dr. Gayden Ward, Jackson
Dr. A. H. Little, Oxford
Dr. Ralph Bowen, Houston, Texas
Dr. F. A. Willius, Rochester, Minn.
Mr. Lew Wallace, Laurel, State Pharmaceutical Association.

Deaths

Dr. William Samuel Martin, 71, dean of Leake County doctors, died at his home Sunday, March 15, 1942. Dr. Martin was a native of Neshoba County, graduating from Memphis Hospital Medical College in 1899. He has been practicing for more than 40 years. He was a member of the Masonic Lodge. Dr. Martin is survived by his wife; two daughters, Mrs. Lucille Hardage and Mrs. Ruth Chadwick, and two sons, Sam, of Carthage, and Rodney, of Mercedes, Texas.

Dr. E. A. Ross, prominent physician of Simpson County, died in a Jackson, Miss., hospital February 27, following a short illness. He was 64 years of age. Dr. Ross was born at Braxton, Miss., Dec. 6, 1877. He received his medical education at Memphis Hospital Medical College, Memphis, Tenn., graduating in 1900. He had practiced at D'Lo all his professional life. Dr. Ross was a Baptist. He was local registrar from 1912 until consolidation of registration districts in 1935. Surviving are his wife, one daughter, Mrs. W. E. Brackenbush, one brother, N. A. Ross, and two sisters, Mrs. M. L. McMillan, and Miss Minnie Ross

Dr. A. L. Chapman died at an Oxford hospital, February 14, where he had been a patient since November 11. Dr. Chapman was born in Eureka Springs, Miss., in 1877. He received his medical education at the Memphis Medical College, Memphis, and was licensed to practice in Mississippi October 13, 1890. Before moving to Courtland he practiced at Lyon, Miss., for about 37 years. He is survived by his wife, two daughters, Mrs. William Seale and Mrs. J. P. Davis, one son, Arthur L. Chapman, of Courtland.

Book Reviews

SYNOPSIS OF ALLERGY, by Harry L. Alexander, A.B., M.D., Professor of Clinical Medicine, Washington University School of Medicine, St. Louis; Editor of *The Journal of Allergy*. Price $3.00. Published by The C. V. Mosby Company, St. Louis, Mo.

This little book has a flexible back, contains 12 chapters, appendix, references; and 22 illustrations. In this book the author has presented the subject of allergy in terms of present-day thought. This cannot be done with exactness because in a subject as young and as changing as allergy, ideas vary according to new discoveries or the proved fallacies of old ones. In the first chapter the history of allergy is discussed with classification of allergy disorders. The book emphasizes history-taking as of paramount importance in diagnosing allergic diseases. The discussion on allergic headache in this timely and most helpful book is very interesting. Drug allergy also constitutes a most interesting and informative chapter in the book.

THE BLOOD BANK AND THE TECHNIQUE AND THERAPEUTICS OF TRANSFUSIONS, by Robert A. Kilduffe, M.D., F.A.S.C.P., Director, Laboratories, Atlantic City Hospital; City Bacteriologist, Atlantic City; Serologist, Municipal Hospital for Contagious Diseases, Atlantic City; Pathologist, Atlantic County Hospital for Tuberculous Diseases; Serologist, Betty Bacharach Home for Crippled Children; Serologist, Jewish Seaside Home, Atlantic City, etc.; formerly, Major, Medical Corps, United States Army; and Michael DeBakey, B.S., M.D., M.S., F.A.C.S., Assistant Professor of Surgery, School of Medicine, Tulane University of Louisiana; Visiting Surgeon, Charity Hospital, Touro Infirmary, and Mercy Hospital, New Orleans; Associate in Surgery, The Ochsner Clinic, New Orleans. 214 illustrations and one color plate. Published by the C. V. Mosby Company, St. Louis, Mo.

This is certainly a timely book and a most valuable one. Every surgeon and every practitioner of medicine should feel a keen interest in this book. Certainly plasma transfusion has risen in importance even for the isolated practitioner. This book discusses this subject fully. The chapter on the universal donor offers a new conception. The technique of transfusion will be found accurate and within the equipment range of any physician administering blood or plasma. And we are also interested in the book because a Tulane man is one of the authors.

NEUROANATOMY. By Fred A. Mettler, A.M., M.D., Ph.D., Professor of Anatomy, University of Georgia School of Medicine, Augusta, Ga. 337 illustrations including 30 in color. Published by the C. V. Mosby Company, St. Louis, Mo.

It seems that Dr. Mettler has spared no pains in preparing the most concise and instructive book possible on the neural system. Especially illuminative are the diagrams which accompany every page of printed discussion. Three and four colors are frequently employed to clarify the drawings and detailed explanations present structures, nerves, divisions and gross features separately. The first part of the text gives the gross aspect of the neural system. The second part deals with the microscopic anatomy in as usable a manner as the student will find. A long list of references open the way for fuller study in the various fields of related medicine.

Not only the medical student but the man in general practice will find this book a sound and graphically presented text on the central nervous system. Price, $7.50.

Mississippi State Medical Association

Organized 1867

Next Meeting: May 12, 13, 14,1942, Jackson

OFFICERS

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Exhibits:

Dr. D. W. Jones, Jackson
Dr. Leon S. Lippincott, Vicksburg
Dr. W. H. Anderson, Booneville

COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	D. W. Hamrick, Corinth	R. H. DeJarnette, Corinth	Third Friday, 6:30 p.m.
Amite	D. H. Thornhill, Crosby	W. T. Thornhill, Crosby	Second Thursday 7:30 p.m.
Central Medical	R. B. Austin, Forest	James G. Thompson, Jackson	First Tuesday 6:30 p.m. July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. P. Walker, Marks	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	B. Z. Welch, Biloxi	D. L. Hollis, Biloxi	1st Wed. each month
Delta Medical	J. D. Simmons, Cleveland	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	C. W. Emerson, Hernando	L. L. Minor, Memphis, Rt. 4	First Mon. Jan., Apr., Jul., Oct.
East Mississippi	W. R. Hand, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	Hugh Johnston, Vicksburg	W. K. Purks, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct
Northeast Miss.	Stanley A. Hill, Corinth	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	J. M. Smith, Magnolia.	V. S. Holmes, McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr.,Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	S. E. Fields, Centerville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Eye—Alston Callahan, Vicksburg.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H, Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

DERMATOLOGY

BACTERIAL FLORA OF THE NORMAL SKIN, Donald M. Pillsbury, M.D., Clarence S. Livingood, M.D., and Anna C. Nichols, M.S., Philadelphia. Archives of Dermatology and Syphilology, Volume 45, No. 1, January, 1942.

Doctors D. M. Pillsbury and C. S. Livingood with the help of Anna C. Nichols, M.S., all of Philadelphia, studied the action of various drugs and antiseptics in degerming the hands. They arrived at several important conclusions, some of them as follows:

Mechanical cleansing of the skin is an effective means of reducing its bacterial inhabitants and is an important part of the treatment of any superficial pyogenic infection. Ordinary fatty acid soap is not a good antiseptic, and the mechanical action of washing or scrubbing is most important in lowering the bacterial count. After having been reduced, the count has a tendency to return to normal. In periods up to one hour, ammoniated mercury ointment and phenylmercuric nitrate ointments have no decided effect on the resident bacteria of the skin, etc. On the basis of these experiments, potassium permanganate, boric acid and solution of aluminum acetate all are relatively ineffective in reducing the bacteria of the normal skin. One could not distinguish between transient and resident bacteria of the skin. All are closely similar. At no time were streptococci recovered.

Alcohol, 70 per cent by weight, is an extremely effective agent in reducing bacteria of the skin. Percentages less than 70 per cent by weight are far less effective. Castellani's carbolfuchsin paint was the only preparation that showed a striking antiseptic action. Wetting agents have shown no effect in increasing the antiseptic action of ammoniated mercury or phenylmercuric nitrate ointments or of potassium permanganate solution.

EYE

CLINICAL OSCULAR CONDITIONS ASSOCIATED WITH VITAMIN B COMPLEX DEFICIENCIES—By L. V. Jackson, Am. J. of Ophthal, November 1941.

The effect of the loss of the various constituents of vitamin-B Complex, (Thiamine, nicotinic acid, riboflavin, choline, pantothenic acid, and para-aminobenzoic acid) on the eye are discussed. Of particular note is vascularization of the cornea when riboflavin insufficiency occurs, and it is suggested that this proliferation of the capillaries may be an effort to combat localized anoxemia.

The essayist mentions the considerable amount of work done by his staff at the Western Reserve University in studying the corneae of rats with the slit lamp, but his major concern is clinical.

Emphasis in this paper is given to rosacea keratitis, a clinical entity which has been discovered comparatively recently, and which is being reported in increasing numbers throughout the literature. Formerly believed to occur with acne rosacea, as a result of alcohol or tobacco, it is now recognized to appear independently of the dermatological condition and to be caused by a deficiency of riboflavin. Treatment consists in a high vitamin B diet (such as liver, eggs and milk), vitamin B complex administration, dilute hydrochloric acid orally, cessation of coffee, tea and condiments, and parenteral administration of riboflavin. A surprisingly short period of only a few days is necessary to the keratitic infiltrate to decrease and disappear.

DISCUSSION: Vitamin therapy, abused by the public and in some instances the profession, plays nevertheless a very special role in certain specific instances. The work of many investigators in their studies of the eye signs of vitamin deficiencies have proved beyond reasonable doubt the great benefit that may be excited by their correct administration. Dr. L. V. Johnson, the essayist, is quite well known in eye literature (note his vitamin paper in the May, 1940, Archives of Ophthalmology, etc.).

The reviewer has seen only one case of this condition, quite recently, where the small localized parenchymatous infiltrate occurred with an associated iritis, and was quite painful. The patient, an apparently well nourished white female age 26, did not mention any gastric disturbance until the treatment had progressed for several days, and then stated that she no longer had "indigestion" which had been present for several months. The administration of the riboflavin under dark room condition proved a salutary stimulation for enthusiastic coöperation with the régime of diet, food and rest.

This paper was presented originally last April at the Louisiana-Mississippi Ophthalmological and Otolaryngological Society, before a group of most of the better E.E.N.T. men in this area. This society meets every year just prior to the E.E.N.T. sectional meeting of the Mississippi State Medical Convention, and is to be commended for its selection of nationally outstanding specialists.

PUBLIC HEALTH

An Assessment of the Nutrition of a Rural Population in Tennessee, by John B. Youmans, M.D., American Journal of Public Health, 31:704-708, July, 1941.

This article is very timely and is of important significance to public health; first, because it deals with nutrition which is claiming more and more attention these days; second, because it deals with a rural population of Tennessee not unlike that which is to be found in Mississippi. This second fact makes the article even more important at this time because little literature has appeared on the nutrition of rural populations. Dr. Youmans presents in this article a preliminary report of his investigation of 2,500 individuals. It is hoped that this report will appear in greater detail soon.

The experimental procedures used in this research included a complete physical examination, a full medical history, collection of pertinent social and economic data, records of food consumption, and certain laboratory tests designed to detect not only frank cases of deficiency but the subclinical or latent forms as well. These tests measured nutrition with respect to vitamins A, B, C, D, and K, niacin (nicotinic acid) and riboflavin, protein, and iron as reflected by the red cell count and hemoglobin concentration. Calories were measured by a record of the diet and general nutrition, growth and development by physical measurements and x-ray examination.

Dr. Youmans is careful to state that this report is only provisional and that final results or conclusions cannot be presented at this time. However, certain trends seem to be disclosed by the survey and these are very interesting. First, there apparently was a high incidence of a deficiency of calories, or undernutrition. The accepted standards were those of the Bureau of Home Economics, United States Department of Agriculture. Second, a rather high percentage of adults and a smaller percentage of older children showed evidence of protein deficiency. Third, anemia was found almost entirely in children and women. This indicated that the iron intake was not sufficient to meet unusual blood losses and the requirements of growth. Fourth, vitamin A deficiency, as indicated by the results of the visual test, existed in a high percentage of cases. Fifth, vitamin C deficiency showed a seasonal variation, being highest during the winter-spring period, and showed an incidence of about 20 per cent. It was much more frequent in infants and adults. Sixth, there was a low incidence of vitamin B deficiency, but riboflavin and niacin deficiency occurred fairly frequently. Seventh, there was a low incidence of vitamin D deficiency, even in the winter-spring examinations. Finally, evidence of the generally mild nature of the deficiency was demonstrated in the fact that no cases of frank, fully developed scurvy, beriberi, pellagra, or vitamin A deficiency were encountered, and only a relatively small number of cases of rickets and nutritional edema were found.

Dr. Youmans concludes his article by stating that, though few cases of severe nutritional deficiency diseases were found, this does not mean that the emphasis on an adequate diet should be relaxed. The milder deficiencies may be even more important than the frank cases because they are much more numerous and their effects may be more serious.

State Board of Health

Felix J. Underwood, M.D.

A WORTHY OBJECTIVE

The May Day objective this year emphasizes immunization. Important as immunization is in peace time, it becomes increasingly so in war time when communicable diseases tend to spread and affect greater numbers of the population. In the interest of child health, it is being particularly urged this May Day that parents, physicians and health departments cöoperate to the end that every child in this country be vaccinated against smallpox and immunized against diphtheria as soon as possible after reaching the age of six months. Considering the seriousness of these diseases and the positive protection which immunization affords, there is no practical reason why this objective cannot be attained for all children in Mississippi.

Backing up the President's proclamation in the furtherance of these objectives, Governor Paul B. Johnson has issued the following:

PROCLAMATION

Whereas, our state is mobilizing its resources for child health and welfare as an important part of civilian defense, and

Whereas, the right start in life is vital to the proper growth and development of the child and

Whereas, Congress by joint resolution in 1928 authorized and requested the President of the United States to set apart annually May 1 as Child Health Day.

NOW, THEREFORE, I, PAUL B. JOHNSON, Governor of the State of Mississippi, in full realization that the health of the child is the power of the state, do hereby set apart the first day of May, 1942, as CHILD HEALTH DAY in MISSISSIPPI.

And, I am calling upon the people in each of our communities to improve the nutrition of that half of our children whose diets are inadequate either through want or ignorance; to immunize children over six months of age against diphtheria and smallpox; to improve mouth health, decayed teeth being the most frequent defect found among children; and to conserve child health through all available knowledge and facilities which are established in our midst to reduce preventable illness among children.

IN TESTIMONY WHEREOF, I hereunto set my hand and cause the Great Seal of the State of Mississippi to be affixed, this the sixteenth day of March, A.D., 1942.

PAUL B. JOHNSON, Governor.

Dr. Maude M. Gerdes, director of Maternal and Child Health of the State Board of Health, is chairman for the forthcoming celebration of May Day—Child Health Day—in Mississippi.

Whooping Cough Immunization. Whooping cough is one of the more severe diseases of childhood about which little has been done in the way of prevention. Yet in recent years there has been added to the disease control armamentarium a vaccine which has proved to be definitely effective in reducing the incidence and severity of whooping cough. Private physicians and public health workers alike have a new responsibility in seeing to it that all children susceptible to the disease, and particularly those under three years of age, receive this protective vaccine. Educational work to encourage people to apply to their physicians for the vaccine is already being undertaken by health workers.

The Lauderdale County Health Department is now offering whooping cough vaccine to all children under three. The plan, which went into effect on January 1, has the wholehearted approval of the medical society. Where patients prefer that the vaccine be administered privately, it is made available to the physician through the health department.

Maternal and Child Health. In pressing the joint report of the Child Hygiene Committee of the State and Provincial Health Authorities of North America and the Committee on Maternal and Child Health of the State and Territorial Health Officers at their annual meeting in Washington, March 23-27, Dr. Underwood, who is chairman of these committees, reviewed the progress which has been made in maternal and child health work and called upon the health officials for a redoubling of effort to insure continued progress of this important work. He stated:

"The health and welfare of the civilian population of this nation is a matter of grave concern . . . The efficiency of our armed forces, our industrial forces, our agricultural forces, and all other civilian forces depends upon good health . . . But the continuance of a well-rounded public health program is becoming increasingly difficult due to the loss of trained public health personnel and physicians to serve in the armed forces. Nevertheless, progress is being made and every effort will be made by those charged with guarding the health of the home front to continue this progress.

"In reviewing some of the accomplishments of the past year, the reports from the various states show increasing numbers of maternal and child health clinics, more nursing services, the continuation and expansion of premature infant care programs, more medical participation by local physicians in clinic services, the continuation of postgraduate courses in obstetrics and pediatrics, and more dental health services—all of which indicates that progress has been made and will continue to be made in expanding the maternal and child health program throughout the country.

"Continued improvement in maternal and child health care is shown by the persistent downward trend of the maternal and infant mortality rates. The maternal mortality rate for the year 1940 was 37.6 per 10,000 live births which is seven per cent lower than that for the year 1939. This is still more encouraging when one considers that the birth rate of 17.9 per 1,000 population for 1940 was higher than that for any year since 1931. Along with this, there was an increase in the number of births in hospitals in the year 1940. Physicians attended 91 per cent of the births in 1940 which was about the same rate as in 1939. The infant mortality rate for 1940 was 47 per 1,000 live births as compared to 48 per 1,000 live births in 1939. Eighty-four per cent of infant deaths in the first month of life were due to prenatal and natal causes, and premature birth was responsible for nearly one-third of all infant deaths.

"Regarding the plans for the evacuation of mothers and children from areas of disaster, it is apparent that we are waiting to follow an overall plan. This is indeed a new problem and will have to be dealt with differently in different areas. Shall we evacuate large numbers of people to a few selected areas? Shall we scatter our population? Or, shall we remain at home and maintain a "life as usual attitude" in the face of disaster-bombing? Selection of evacuation centers may be necessary in areas away from danger zones, probably in the more inland states. I believe these emergency problems should be opened for discussion so that we may all be guided in our immediate planning for the future so that we may not be found wanting when the time comes. 'Too late and too little' may defeat our efforts—the time is now."

CHILDREN'S BUREAU COMMISSION ON CHILDREN IN WARTIME. The Children's Bureau Commission on Children in Wartime, on which Dr. Underwood has been appointed to serve, met in Washington, March 16-18, 1942. The commission adopted three resolutions and a report which included a charter for children in the United States grouped under the following objectives:

1. Guard children from injury in danger zones.
2. Protect children from neglect, exploitation, and undue strain in defense areas.
3. Strengthen the home life of children whose parents are mobilized for war or war production.
4. Conserve, equip and free children of every race and creed to take their part in democracy.

In elaborating on the fourth objective, "Conserve, equip, and free children of every race and creed to take part in democracy," certain factors were pointed out that take on new significance in the present war crisis. They are as follows:

Health and children. Good health in childhood lays the foundation for good health in later life. Children should have health supervision from the prenatal period through adolescence. Special planning is needed to overcome present and future shortages of doctors and nurses. As soon as possible every county in the United States should have public-health-nursing service, prenatal clinics, delivery care, child-health conferences, and clinic and hospital service for sick children.

Food for Children.

The needs of children must be considered first in the event of national or local shortages of foods, especially of milk and the other protective foods. If our country is to be strong, all children must have the food they need for buoyant health and normal growth, and information must be available to parents concerning the family food requirements. Family incomes should be sufficient to assure to each member of the family the right amounts and the right kinds of food. School meals are an effective means of supplementing home nutrition and educating children and their families in good food habits. The extension of penny milk to all children is an important aid in assuring to them their full share of this essential food.

Social Services for Children.

Communities should be equipped to supplement the care and training given by home when the welfare of the child demands it. Child-welfare and child-guidance resources of the state, county, and city governments should be expanded to provide appropriate service and care for all children with special needs.

The Right to Play.

More than ever in wartime recreation must be assured for children and youth through the full use and expansion as needed of all public and private leisure-time activities.

School and Work.

It is essential that children and youth be sound and well-prepared in body and mind for the tasks of today and tomorrow. Their right to schooling should not be scrapped for the duration. Demands for the employment of children as a necessary war measure should be analyzed to determine whether full use has been made of available adult manpower and to distinguish between actual labor shortage and the desire to obtain cheap labor. The education and wholesome development of boys and girls should be the first consideration in making decisions with regard to their employment or other contribution to our war effort. This means that no boy or girl shall be employed at wages that undermine the wages for adult labor; none under 14 years of age shall be part of the labor force; none under 16 shall be employed in manufacturing and mining occupations; none under 18 in hazardous occupations.

Health and Education.

A measure urgently needed at this time is complete medical examinations of all boys and girls of high school age at regular intervals, with provision for correction of remediable defects. Provision should be made for a Nation-wide extension of health services for school children including medical care as needed and health instruction, developed through the co-operation of health and education authorities. The need for health supervision and medical care for youth has been demonstrated until there is no longer any possibility of disregarding it.

Young Children.

In the war period special consideration should be given to the needs of all young children for security in the homes and for opportunity to grow through association with other children in play and through the reassurance given by adults who have learned to understand their needs. Opportunity for nursing education should be made increasingly available to help meet situations created by the war.

Children In Rural Areas.

More than half of the children of the nation live in country districts. Far more than city children they are likely to be handicapped by early and harmful employment, inadequate schools, and lack of other community facilities. The war effort must not increase these handicaps.

Participation In Civilian-Mobilization Programs

Boys and girls should participate in home and community efforts for the war through activities appropriate to their age and ability.

IN MEMORIAM

William E. Noblin, M.D.
1875-1942

In the death of Doctor Noblin on March 11, 1942, the public health forces of Mississippi have lost a wise counselor, a forceful leader and teacher, a kindly man, and a dear friend.

With the wisdom he had acquired through wide experience together with rare qualities of personality, he was a dominant figure among his fellows. Dr. Noblin was unusually endowed to become such a figure. Untiring energy applied to the enlargement of this endowment made of him a man of great insight, rare force, fine tact, a lover of culture and of humanitarian endeavors.

It is known that he brought to every decision a sense of fairness which made his counsel much sought. As a public health official he has left an imprint that will long be remembered. Even after illness began, his efforts continued for the improvement of the public health and welfare of the city of Jackson and Hinds County which he had served faithfully as health officer since 1927.

* * *

EVAN MOODY GAVIN, M.D.

1887-1942

Public health lost another valued friend in the death of Dr. E. M. Gavin on March 11, 1942. Dr. Gavin was chairman of the Public Health Committee of the state senate and has done much constructive work in the interest of the state's health program. From 1919 to 1925 Dr. Gavin was a member of the Mississippi State Board of Health.

Woman's Auxiliary

TO THE MISSISSIPPI STATE MEDICAL ASS'N.

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MRS. STOWERS URGES HEALTH DEFENSE IN PRE-CONVENTION MESSAGE

In reply to a question which has come to me several times this year, I believe it is important to stress our major objective this year—health for defense. Many have asked: "What can we do in the remaining months of our auxiliary year?" This desire to be doing something that will count in the defense effort is evidence of the responsibility auxiliary members feel in the emergency. And the most important phase of health promotion is in nutrition.

Nutrition is important in all programs this year. Our reports show that every county is working through the schools, churches and clubs. The Health Education Bureau of the American Medical Association, under the direction of Dr. W. W. Bauer, has authentic and usable articles on the subject. HYGEIA and the BULLETIN also carry valuable information and suggestions. We are urged to coöperate with the Red Cross, local civilian defense and other national organizations approved by the A. M. A. Think health defense, plan for health defense, work constantly for health defense!

Our annual convention draws near and we are anxious to have a large representation. Mrs. Mosiman, the national president, the doctors of our advisory board, Dr. Emma Gay, and Dr. T. M. Dye, secretary of the State Medical Association, will be guests of the Auxiliary.

Read Article IV, Section 3, and Article V, Section 2 of the Constitution, which state plainly our privileges. Please make use of them.

Mrs. Allman, convention chairman, urges each county president and members of the State Executive Board to attend the A. M. A. Convention to be held June 8-12, in Atlantic City, New Jersey.

Let us make the 1942 convention the best ever.

SOUTH MISSISSIPPI AUXILIARY

The members of the Auxiliary to the South Mississippi Medical Society met last month in the home of Mrs. S. E. Bethea of Hattiesburg, with Mrs. C. C. Hightower, Mrs. T. E. Ross, Mrs. L. B. Hudson, Jr., Mrs. R. L. Simmons as co-hostesses. The meeting was preceded by a delightful buffet luncheon served in the dining-room. A St. Patrick's motif effectively accented the fresh charm of the springtime in floral arrangements about the reception suite.

At the business session the following officers were elected: Mrs. Grady Cook, president; Mrs. B. D. Blackwelder, president-elect; Mrs. R. F. Ratcliff, first vice-president; Mrs. T. E. Ross, second vice-president; Mrs. J. N. Mason, secretary; and Mrs. E. S. Busby, treasurer.

The group agreed to conform to the trend for simpler entertaining by having afternoon meetings with light refreshments for the duration. All members reported various defense work activities. And a subscription to the READER'S DIGEST was donated for the patients in the Station Hospital, Camp Shelby.

BULLETIN

A few more months, and the members of the Woman's Auxiliary to the American Medical Association will be arriving in Atlantic City, New Jersey, for their annual convention, June 8-12.

Have you made your reservation? If not, send your request *at once* to Haddon Hall, Atlantic City, New Jersey.

SUGGESTED HEALTH PROGRAM

The Woman's Auxiliary to the Iowa State Medical Society presents the subject. "The Doctor's Wife and Defense," for consideration in our study groups.

Objectives

May this study mean not only self-education but, through our contact with lay groups, an ever-expanding educational process for the maintenance of health in our state and nation. The objectives are a proper understanding of: food values necessary to health; foods that build and repair the body, meet energy requirements, regulate body processes, promote growth and protect against disease; digestive processes related to health; importance of personal health for efficient effort; correct preservation and preparation of food; planning of balanced menus for the family; wise use of the dollar in the purchase of food; preventive and curative use of foods which enable us to coöperate with the physician.

Outline

I. The buying of foods, considering quality and costs.
II. The protective foods.
III. Preparation of foods.
IV. The fortifying of our staple foods.
V. Food fads and fallacies.
VI. Feeding the various age levels.
VII. Food as preventive medicine.
VIII. Food in curative medicine.

(See p. 132 Spring Bulletin)

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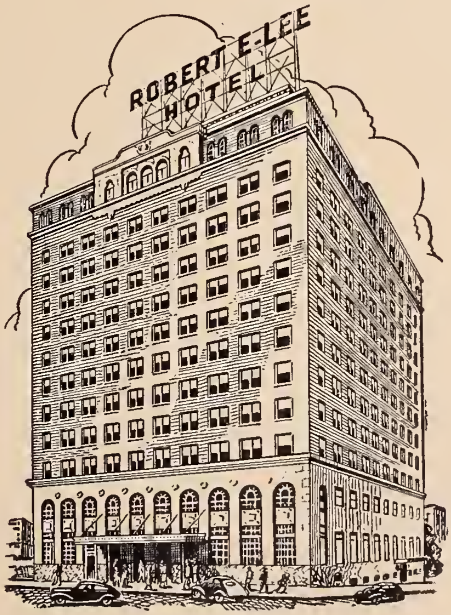

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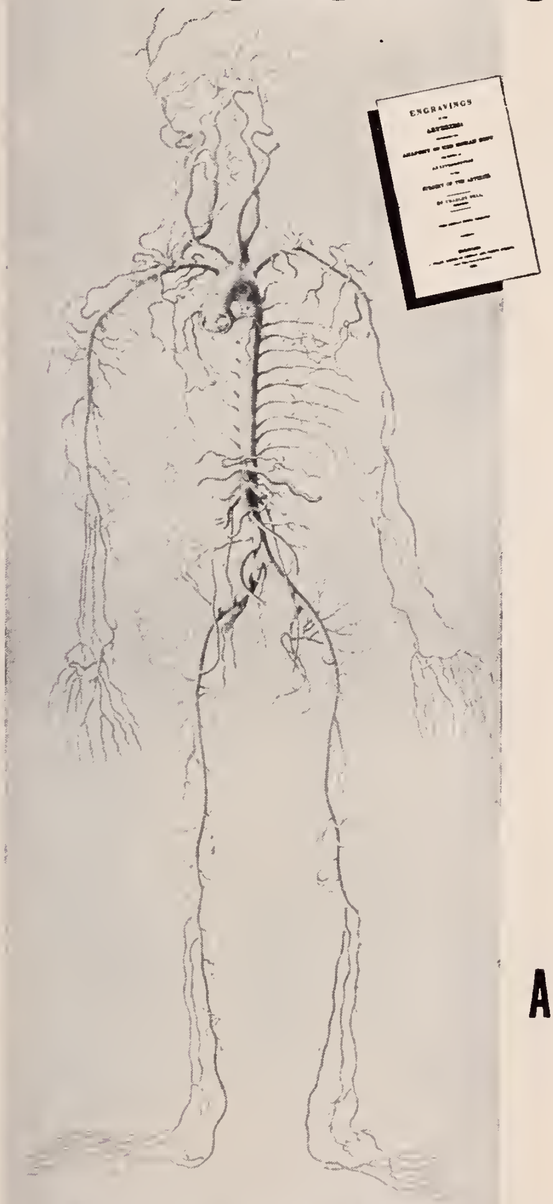

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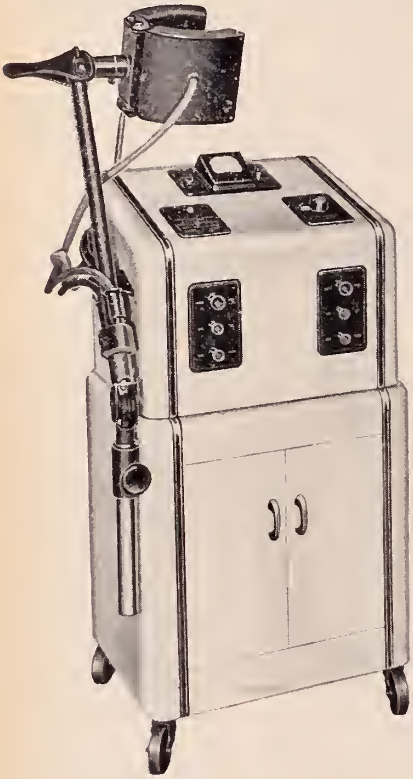

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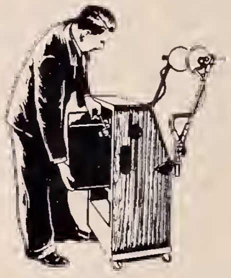

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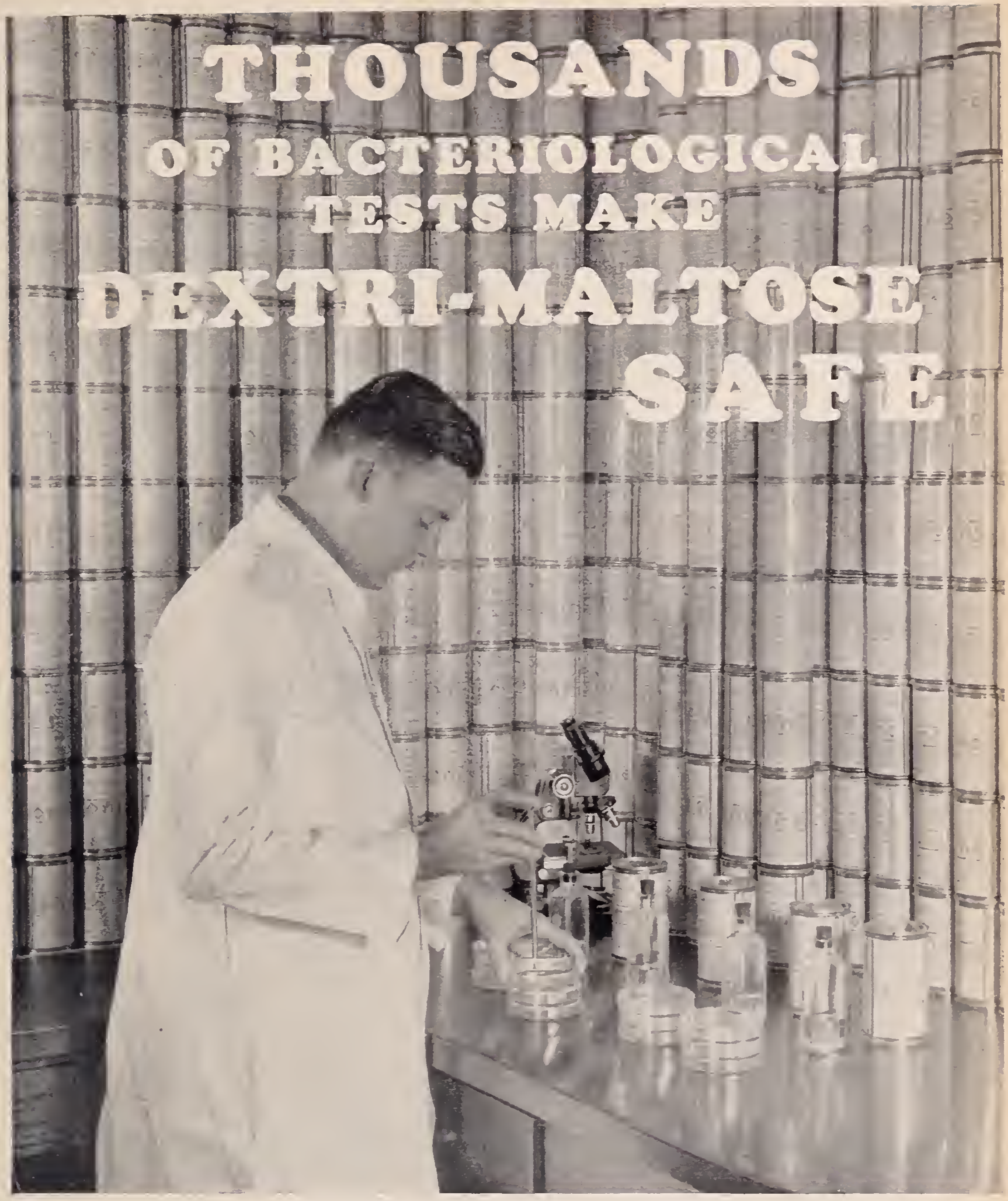

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1. ROMEO, Z. J.: Sulfur and Soap as Effective Prophylaxis Against "Chiggers" (Red Bugs) in the Army, Mil. Surgeon **90**:437 (April) 1942.
2. NOLAN, R. A.: A New Method of Treating Scabies, Mil. Surgeon **82**:52 (Jan.) 1938.

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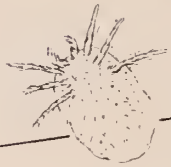

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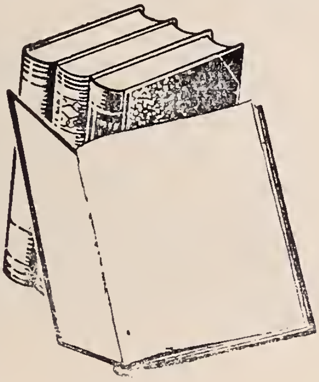

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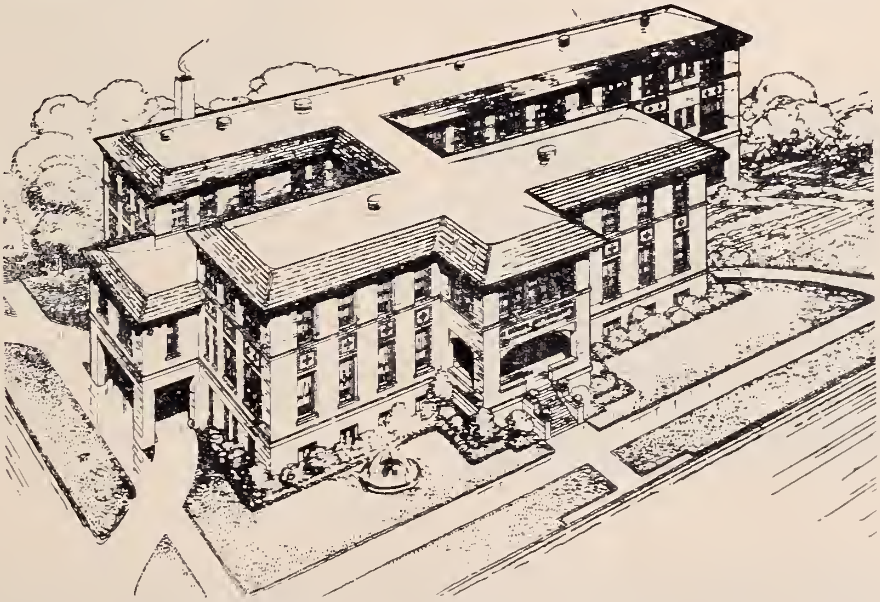

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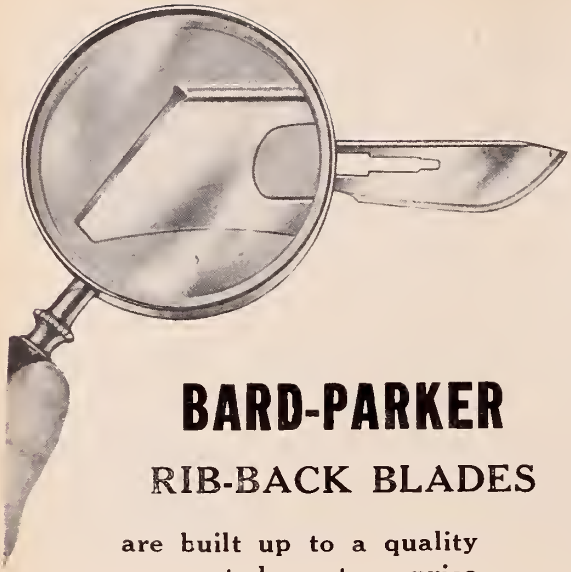

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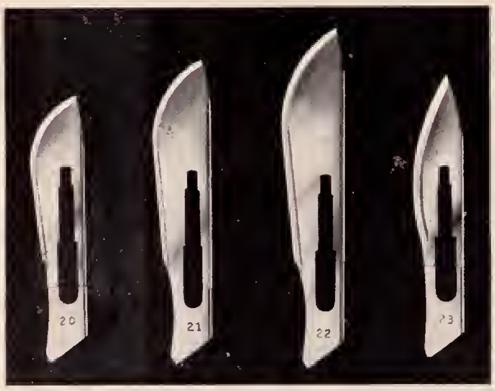

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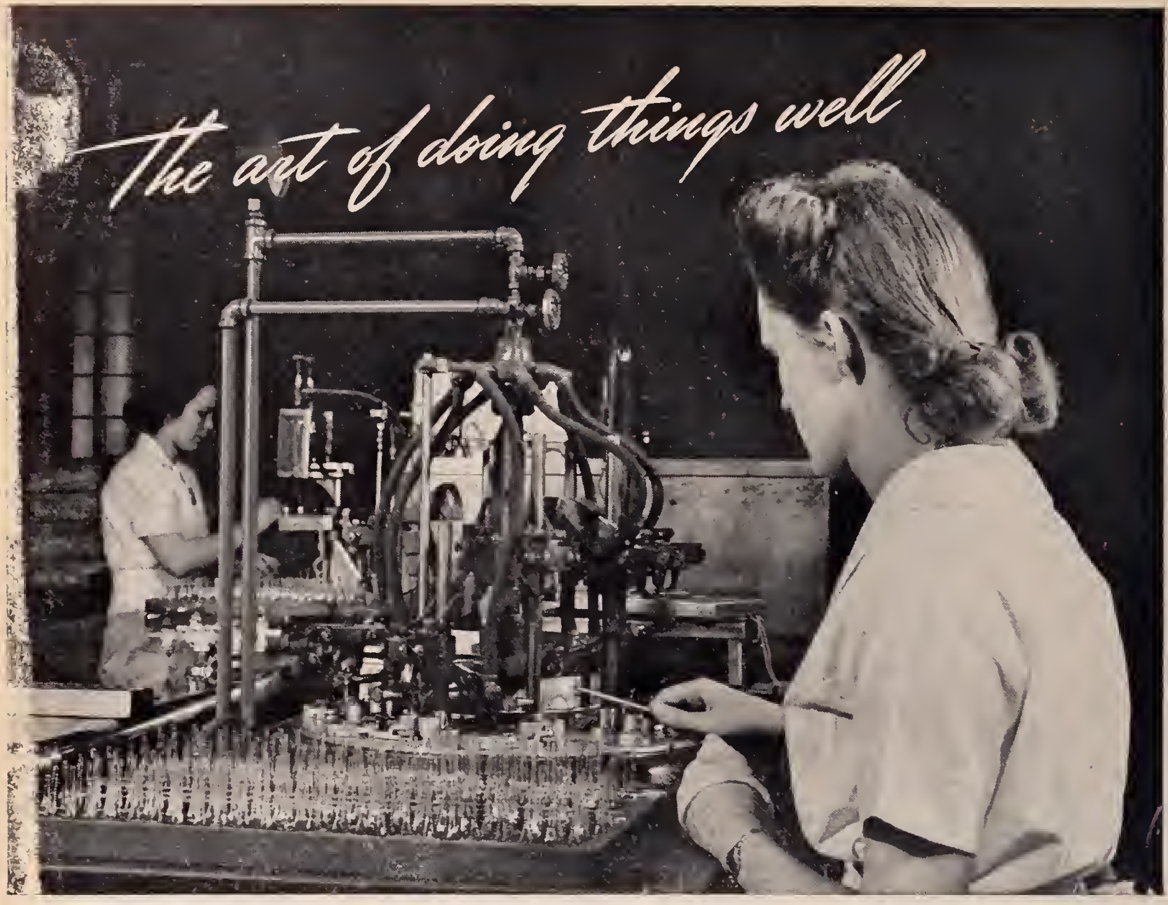
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Diagnosis and Recent Advances in the Treatment of the More Common Anorectal Diseases*

HARRY E. BACON, M.D., F.A.C.S., F.A.P.S.
Clinical Professor of Proctology, Temple University Medical School
OTHO P. GRIFFIN, M.D.
Fellow in Proctology, Temple University Medical School
PHILADELPHIA, PA.

THE ADVANCE IN anorectal surgery has attained great momentum and today has achieved a conspicuous place in major specializations. According to an authoritative source, one-fifteenth of the total population of the United States suffers from a complaint referable to the anorectum. It seems expedient, therefore, that the various processes peculiar to this portion of the intestinal tract be considered.

PROLAPSE. Except for those cases which present some manifestations from the anal aperture as is occasionally seen in procidentia and extensive prolapse, the condition is seldom recognized, yet it is one of the most frequent entities to be encountered. Any factor, whether anatomic, mechanical or inflammatory, that tends to diminish the normal fascial, muscular or peritoneal supports of the rectum, thereby increasing the motility, is conducive to prolapse and, or procidentia. To one accustomed in the use of the proctosigmoidoscope with the patient in the inverted or knee-shoulder position, varying degrees of mucosal prolapse are easily discernible. Only too frequently these patients offer a history of chronic constipation, an indeterminate type of pressure, a fullness or weight in the pelvis, and incompleteness on evacuation of the bowel. Careful examination discloses complete absence of the normal mucosal pattern, and partial or complete obliteration of the valves of Houston. Marked redundancy and reduplication of the rectal mucosa will be noted by digital examination and through the sigmoidoscope. Not infrequently the condition is associated with redundant sigmoid as evidenced by roentgenographic study following an opaque enema. In children, prolapse is amenable to injections of quinine and urea hydrochoride or phenol in oil given in $\frac{1}{4}$ cc. dosage circumferentially at graduated levels. In adults, a modification of the procedure advocated by Murietta[1] in 1938 is ideal. The patient is placed in the inverted position under sacrocaudal or lumbar analgesia, and the prolapse of the anterior wall drawn taut longitudinally and clamped. The prolapse is excised and a running mattress of fine chromic catgut introduced beneath the clamp. The suture line is inverted by a second catgut stitch. The posterior wall is drawn taut in a transverse fashion. Anchor sutures are placed at the extremes and as the prolapsed bowel is excised, clamps are applied to the cut edges of the mucosa. A running mattress of fine chromic is introduced and the resultant line of suture inverted by a second layer. Over nine hundred cases have been operated upon by this method with gratifying results. In this series two cases of hemorrhage and three of stenosis were encountered.

Hemorrhoids represent varicose dilatations of one or more radials of the hemorrhoidal plexus of veins. Good results are to be obtained by the injection treatment provided the cases are selected. This form of therapy is indicated only in hemorrhoids of the internal variety which are uncomplicated. The high percentage of recurrence materially limits its field of usefulness. We respect the fact that a hemorrhoidectomy properly performed is by all means the procedure of choice. Unfortunately, various sequelae are encountered following the surgical removal of hemorrhoids, of which may be mentioned hemorrhage, immediate and remote, severe pain, anal stenosis, residual infection, abscess formation, fissure and recurrence of the hemorrhoids themselves. The occurrence of such is due largely to lack of knowledge of the anatomy of this portion of the anorectum, and the pathologic process itself, unnecessary trauma, failure to preserve adequate anal and perianal skin, inclusion of the sphincter muscle in the clamp and suture, and inadequate aftercare.

---

*Read before the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 18, 1942.

Because of the severe postoperative pain following hemorrhoidectomy, a technic was devised by us which has proved of value, not only in the avoidance of pain, but also in the elimination of complications and sequelae. The procedure was reported only after its performance on over a thousand patients[2]. With the period ending May 1941, this technic was employed in 162 cases[3]. In this series the frequency of severe postoperative pain is less than eight per cent; anal stenosis occurred in 12 cases. (.007%); subcutanenous abscess in five cases (.003%); fissure in one case. No cases of hemorrhage, incontinence, or recurrences have been noted[4].

Under low lumbar analgesia, the dosage being estimated according to the body weight,[5,6] and with the patient in the jackknife position, a retracting speculum is introduced and the pile masses are drawn outside the anus in their respective quadrants. Additional hemostats are applied to the hemorrhoids to bring into view as much tissue as possible without undue tension. If external hemorrhoids are present, a small elliptic incision is made on the lower lateral side of each hemorrhoid in such a manner that it begins at a point just distal to the anorectal line, and is carried one-half inch beyond the tip of the external pile mass. The skin on either side of the hemorrhoid is elevated with fine forceps and the underlying tissue separated with small, blunt-tipped curved scissors. The opposite side of the pile mass is treated in a similar fashion.

The hemorrhoid is now elevated and blunt dissection is begun at the apex where the two incisions are joined. The adjacent veins, which have been freed on either side, are now drawn medially by an assistant and the operator continues with the blunt dissection on the surface of the external sphincter muscle. When the inner edge of this muscle is encountered, a small right-angle retractor is placed so as to draw the muscle gently from the field of operation. A Smith hemorrhoidal clamp is now placed on the hemorrhoidal mass in the longitudinal axis of the bowel and the mass cut away. A suture of No. 0 chromic catgut on a small curved needle is introduced one-quarter inch from the tip of the clamp and tied, the free end to serve as an anchor. The base of the hemorrhoid is sutured beneath the clamp from side to side and continued to the opposite end of the hemorrhoidal base which lies immediately over the edge of the external sphincter muscle. The clamp is removed as well as the retractor and the muscle permitted to return to its usual location. A subcutaneous bed is formed by continuing the suture to the outer limit of the apex.

All hemorrhoidal masses are treated in a similar fashion. Ordinarily it is unnecessary to approximate the cut edges resulting from the excision of external homorrhoids, inasmuch as they fold nicely together as soon as the tonicity of the sphincter is restored. However, we do not hesitate to insert two or more sutures of black silk or No. 35 steel alloy wire interruptedly. Ten cubic centimeters of diothane are injected into the substance of the sphincter muscle through a single puncture in the posterior midline behind the anal verge. A modified McKenny drain, consisting of a four-inch, No. 14 soft rubber tube, surrounded by a strip of wet cellophane, is introduced and dressings applied.

Immediately on the patient's return to his room, the foot of the bed is elevated for six hours, where a hypobaric (light) analgesic solution is used intraspinally. Liquids, a light soft diet and smoking are permitted. Compresses wrung out in hot boric acid solution are applied continuously. At night these may be supported by a hot water bottle. Morphine sulphate in ¼ grain dose or dilaudid gr. 1/20 is given only if necessary. The blood pressure is recorded every hour for six hours in both arms. Twenty-four hours after operation the cellophane tube drain is removed and an aqueous solution of one per cent gentian violet applied on a glass rod. Liquid petrolatum is given by mouth once or twice daily and continued for approximately ten to fourteen days. On the second postoperative day, an enema of warm saline or olive oil is administered through a No. 14 soft rubber catheter. Milk of magnesia ounces one-half to one is given by mouth thereafter. Following bowel movement, the patient is permitted out of bed, a house diet is prescribed and hot sitz baths thrice daily, at a temperature of 110 degrees Fahrenheit at a depth of six inches for five minutes, are begun.

When discharged on the third or fourth postoperative day, the patient is advised to continue with the sitz baths, employ cotton tissue rather than toilet paper and have one daily evacuation. Skin sutures are removed on the fifth to the seventh day, at which time the lubricated gloved finger is introduced.

Pilonidal cysts and sinuses are encountered with comparative frequency. Pain and discomfort of varying degree, swellings and mucopurulent discharge with incision and drainage on one or more occasions, are usually cited by the patient. Examination discloses one or more openings in the midline or adjacent skin overlying the sacrococcygeal region. An inflammatory process presenting heat, swelling, tenderness, induration, redness and fluctuation, with pus discharging from the opening and perhaps a turf of hair extending therefrom, leaves little doubt as to the diagnosis.

The treatment is distinctly a surgical one, and consists of the removal of the cyst, sinus and all tributary tracts. The relative merit of closing or permitting the resultant wound to heal and fill in by granulation, is and probably always will be a moot question. Over the ten-year period ending 1938, a series of 414 operative cases were studied in the proctologic clinics of the Graduate and Temple University hospitals. Conclusions drawn from this survey have established rather definite criteria for both the open and the closed methods[7].

Pilonidal cysts and sinuses presenting acute abscess formation, and or multiple tracts and openings and or definite involvement of the sacrum coccyx, are best excised in their entirety and left open to granulate in from the bottom. Recurrent cases fall in this category also. Conversely, pilonidal cysts and sinuses of small or moderate size presenting congenital midline openings, and devoid of an acute inflammatory process with abscess formation may be sutured. In the latter, as in all cases, all existing pathology must be removed; hemostasis complete and all dead spaces obliterated. For closure, interrupted sutures of No. 32 alloy steel wire placed in tier formation are introduced until the skin is reached. The skin itself is approximated only by the wire inserted subcutaneously. From 1938 until December 1941, 70 private cases have been closed by this method. All have been followed carefully and in no instance has recurrence been observed. The average period of hospitalization was 3¾ days; the average period from the date of operation until complete healing was noted was 39 days or approximately 5½ weeks.

Cancer of the rectum and sigmoid represents approximately 80 per cent of all intestinal malignancies. In the male, it stands second only to that of the stomach. It is difficult to state accurately whether cancer is on the increase; certainly today this disease process is being observed in greater frequency. There are several reasons that may serve to explain this: first, improvements in diagnostic technic and the more widespread use of these methods; and second, patients are transitioned over the gaps of intermediary illnesses and therefore reach an age when cancer is more common.

A few years ago it was my privilege to review the literature on the incidence of malignancy of the anus, rectum and sigmoid in youth. One hundred and twenty-three authentic cases were found below the age of 20. Two cases that came under our observation were: a male, 4 years, 7 months old, with an adenocarcinoma of the rectum. The boy was resected and is well five years following operation.[8] The second, a male 3 years, 8 months of age, had a reticulo-endothelial sarcoma of the rectum, was resected, but succumbed 17 months later.[9] It seems expedient to state, therefore, that while the majority of cases of rectal and sigmoidal malignancy are encountered between the fortieth and sixtieth years, they may be observed at any age—in fact we would rather say, "there is no cancer age."

There are no pathognomonic symptoms of rectal or sigmoidal malignancy, but there are complaints that are highly suggestive: The passage of blood, bright or dark red in color, occurring at, following or independent of the defecatory act, must be looked upon as one of bowel malignancy until proved otherwise by various diagnostic means. Change in bowel habit, progressive constipation, or alternate constipation and diarrhea; early morning diarrhea, incompleteness of evacuation, urgency and frequent desire for stool are suggestive of this dreaded malady.

One must be mindful that approximately 78 per cent of cancer involving the anus, rectum and sigmoid are within reach of the examining finger. Therefore, following a careful history, digital interpretation is of utmost importance. By proctosigmoidoscopy, with proper cleansing of the bowel and correct position, the entire rectum, lower and mid-sigmoid may be visualized in over 90 per cent of the cases examined. The presence of a cauliflower-like growth involving the mucosal wall, presenting fixation and nodularity, a deep excavating ulcer with everted edges will serve to make the diagnosis. A biopsy may be made for confirmation, but in addition, will disclose the type and grade of tumor.

Where no lesion is demonstrated by careful digital and sigmoidoscopic examination, a roentgenologic study of the bowel, employing an opaque enema, is invaluable.

To cure cancer means early diagnosis and radical extirpation. It is definitely erroneous to assume that a malignant tumor of small size should be eradicated by a conservative operation, or that one of large size should be removed by a very radical operation.

The investigations of Westhus[10], Gilchrist and David[11], Miles[12], Simpson and Mayo[13], McVay[14], and others[15,16,17,18,19,20] will leave not a shadow of doubt as to the veracity of this statement.

The radical one-stage abdomino-perineal resection advocated by Miles in 1910, is today still the procedure par excellence. It permits wide removal of the gland bearing areas, offers a low recurrence rate and a mortality of about ten per cent depending on the source. It presents one great disadvantage, namely, the establishment of an abdominal colostomy. For this reason alone, innumerable patients jeopardize their lives by refusing what radical surgery might offer. The ingenious procedure designed by Babcock[21] in 1931 permits the same degree of wide excision of the malignant rectum and gland bearing areas with formation of a perianal anus in its normal location. By such, an abdominal colostomy is avoided. Performed through the abdomen and perineum termed abdomino-perineal proctosigmoidectomy, or entirely by perianal approach, termed perineal proctosigmoidectomy, the cancerous bowel is dissected free and the vascularized sigmoid drawn down to the site of the normal anus. Preservation of the sphincter and levator muscles gives good control as well as excellent cosmetic results. During the five months' period ending January, 1941, 18 patients have been subjected to this operation alone with but one death; mortality 5.5 per cent.

Chronic ulcerative proctosigmoiditis, described by some as thrombo-ulcerative proctosigmoiditis, is a condition frequently observed. Characterized pathologically by typical changes in the intestinal wall and clinically by its progressive course, the passage of frequent bloody, mucopurulent discharges, tenesmus, abdominal pain and general lassitude, it is not difficult of diagnosis. One should be mindful that 95 per cent of these cases have their origin in the rectum or lower sigmoid. This, itself, gives evidence of the necessity for proctosigmoidoscopy in routine examination.

Early in the disease, the mucosa exhibits a rather diffuse hyperemia. As the process continues, edema and pitting of the mucosa is apparent. Minute yellowish abscesses may be seen beneath the mucosal layer, which upon rupture form ulcers which give a moth-eaten appearance to the already granular lining of the membrane. In some cases an ironed-out or rounded appearance of the valve edges is discernible. At a later stage, confluence of these petechial ulcerations form large ragged areas. Fever of the septic type is not uncommon, especially during the acute stage, or in exacerbations of the chronic. Ordinarily the blood count discloses a secondary anemia and a mild leucocytosis. In all these cases it is highly expedient to study the case thoroughly in order to rule out a specific influence. Smears are made by scraping the rectal mucosa and vaccines prepared where pathogenic organisms are found. An opaque enema is administered, for the purpose of determining the upper extent of the disease process. In febrile cases, bed rest is imperative. Factors influencing the physical and mental status of the individual are corrected. In fulminating cases, enteral feeding is employed, otherwise a diet that is of low residue, bland, high in calories and vitamins, as well as proteins, yet low in starch and sugar is prescribed. We have found that frequent small blood transfusions have proved most efficacious. Locally, where the process is confined to the rectum and lower sigmoid, gentian violet, two per cent aqueous solution through the sigmoidoscope with insufflation of sulfanilamide has proved advantageous. Retention enemas of olive oil and cod liver oil may be judiciously used. For diarrhea, kaomagma, kaopectate by rectum and by mouth is usually satisfactory. A mixture of bismuth subcarbonate ʒi in warm olive oil ʒiv by rectum three or four times daily is beneficial. During the past few months, thiamine chloride, 100 mgm. intramuscularly or by mouth, and nicotinamide, 50 mgm. have been used. Our results have been more satisfactory using sulfadiazole than with the sulfanilamide preparation. It may be necessary to use this intravenously, but for the most part the cases have been given it by mouth.

Abscesses in and about the anorectum demand surgical intervention. In the past it has been our custom simply to incise and drain unilateral and bilateral abscesses of the ischiorectal type. Later, the fistula was corrected. In an effort to avoid multiple operations and protracted periods of hospitalization and convalescence, an attempt is made to locate the primary or internal opening at the first sitting. In this type of abscess, the anorectal line is carefully inspected, visibly, digitally and by means of a hook, for an ulcer, a crypt or a breech in the continuity of the skin or mucous membrane.

At the maximum point of fluctuation and beyond the outermost border of the external sphincter muscle, a stab wound is made into which a flexible metal probe is gently introduced toward the primary opening. The skin incision is carried to a point so that excision of the fistulous tract is at right angles to the fibers of external sphincter muscle. The skin over the abscessed cavity is then widely excised, permitting adequate drainage. Ordinarily a single strip of vaseline gauze is placed in the fistulous wound for a period of 24 hours. Additional gauze is gently placed in the cavity. It should be mentioned that for the novice this procedure is not to be recommended. Here, it is better simply to incise and drain and later remove the fistula. We have performed this maneuver in selected cases without recurrence. Operative wounds are never packed after a period of 48 hours, and sitz baths thrice daily are continued.

Pruritus ani is a syndrome embodying an alteration in the anal and perianal skin, due to irritation in the peripheral nerve-endings, caused by some local or systemic disease. The chief symptom is itching of varying intensity, which is characterized by its chronicity, rebelliousness to treatment, and tendency to recurrence.

So long as there is no one specific cause of pruritus, just so long will there be no specific treatment. Much has been written about and suggested for this distressing malady, and while the treatments have been worrisome and frequently unsatisfactory, the chief purpose in following any procedure whatsoever is to allay the distress while attempting to seek the cause. The examination should be thorough and untiring, using every available means to find some influencing factor. Should any anorectal disorder be discovered, it must be corrected. Invariably, where this exists, its cure will result in definite improvement. Cleanliness is essential and may be accomplished by washing the anus and surrounding areas with warm water and castile soap twice daily and after defecation. Absorbent cotton is preferable to any toilet paper now in use. Irritations from tight clothing, tending to rub the anal skin, should be avoided.

Importance of the dietary régime should not be underestimated; not only are certain foods irritating of themselves, but the manner in which even bland foods are prepared and seasoned may render them unsuitable. Green vegetables, especially spinach, peas, and carrots, are permitted, as well as potatoes, milk, cereals and fruits, both fresh and stewed. Fowl and moderate amounts of unseasoned red meat may be taken. Water should be consumed liberally. Such foods as oatmeal, salt fish, oysters, clams, crabs, lobsters, cheese, pickles, and cucumbers are interdicted. Excessive eating, the use of condiments, and over-indulgence in alcohol are to be avoided, as well as a superabundance of seasoning.

Inquiry as to the general health and habits of the individual should be made. Fresh air, sunshine and rest are advocated for those who are below par. Tonics of iron, phosphorus, arsenic, and codliver oil may aid generally in improving the health.

It has been shown that nervous irritability in these cases should not be minimized, and for this potassium bromide, 5 to 10 grains, or phenobarbital, either the sodium salt, ¼ grain, or the elixir, ½ to 1 dram is given every three hours for a few days.

Insomnia may be relieved by the use of one of the barbiturates, as luminal, 1 to 2 grains; nembutal, 3 grains; or bromide, 10 to 20 grains, using either the sodium or strontium salt. The opiates are interdicted.

Sluggish intestinal evacuations may be corrected by the use of one of the following, given once or twice daily as necessary: Cascara sagrada, ½ to 1 dram; magnesium sulfate, ½ to 2 drams; liquid petrolatum, ½ to 1 ounce; or enemas of plain hot water, salt water, or warm olive oil. As an intestinal antiseptic, the sulfocarbolate of zinc, 5 grains every 2 hours, is advocated after proper bowel function has been restored.

ASSOCIATED PATHOLOGY: Anorectal pathology, such as hemorrhoids, fistulas, cryptitis, papillitis, condylomas, skin tags, proctitis, etc., should be corrected. Helminths, as pin or threadworms (Oxyuris vermicularis) may be destroyed by use of santonin, 1 to 3 grains; or calomel, 2 grains given for three successive nights. Where fungi have been demonstrated, Terrell[22] recommends the administration of potassium iodide, saturated solution, beginning with 20 drops thrice daily and increasing one drop until the symptoms of iodism appear. Thereafter, the dosage is decreased slightly and continued for several weeks. Many patients improve upon reaching the saturation point and remain symptomatically free for varying periods of time. Whitfield's ointment and Deek's ointment (salicylic acid, 4 per cent, mercury salicylate, 4 per cent, oil of eucalyptus, bismuth subnitrate, 10 per cent, in a mixture of equal parts of lanolin and petrolatum) are of value. Rectal irrigations of lime water; quinine bisulfate, 1:2000; infusion of quassia, 5 per cent; saline solution 1 ounce to 1 pint of water; acetic acid, ¼ to 1 per cent solution; and turpentine or benzine may be instituted.

Dermatologic conditions, such as eczema marginatum and tinea trichophytina, may be eradicated by salicylic acid, 10 to 15 grains, to 1 ounce of petrolatum; crude coal tar, ½ dram to 1 ounce, liquor detergens, ½ dram to 1 ounce; or the following:

R

Iodi	gr. xx
Potassi iodidi	gr. xl
Acici salicylici	gr. xlv
Acidi borici	ʒiss
Alcoholis	ʒiii
(50%	q.s.fl.

M. et ft. solutio.
Sig.—Apply locally and allow to dry.

In mild pruritus, the following may be used:

R

Phenolis	gr. x
Lotio calaminae, q.s. fl.	ʒiii

or

R

Acetanilidi	ʒi
Petrolati	q.s. ʒi

M. et ft. unguentum.

In some cases, citrine or chloroform ointment will allay the itching. If the area is moist, dusting powders, as zinc stearate or calomel, may be used. The following is recommended:

R

Dithymol-diiodidi	ʒi
Bismuthi subcarbonatis	ʒiii

M. et ft. pulv.

The skin should be washed with warm water and castile soap and dried before the powder is applied.

If the skin is thick and leathery, mercury, phenol, 1 to 5 per cent in lotion or ointment form, and silver nitrate, 1 to 15 per cent are stimulating. Potassium permanganate, saturated solution (29½ grains in 1 ounce water), may be painted over the surface daily. Liquor potassae, solution of mercuric chloride or a 10 per cent nitrate of mercury ointment have proved of value. If the skin is acutely inflamed, calomel and lime water may be applied:

R

Hydrarg. Chlor. mitis	gr. xvi
Liquor calcis	q.s. ʒiv

Cracks, fissures, and excoriations may be treated by topical applications, using a glass rod or stick, of (1) phenol, 90 per cent solution, neutralized by tincture of benzoin; (2) silver nitrate, 10 to 20 per cent solution or stick, neutralized by tincture of iodine; (3) silver nitrate, 50 per cent solution, used alternately with citrine ointment; (4) pure ichthyol; or the following:

R

Phenolis	gr. xx
Acidi salicylici	ʒi
Camphorae	gr. v
Glycerini	q.s.fl. ʒi

M. et ft. solutio.
Sig.—Apply locally.

Following the use of the foregoing prescription, when excoriations are healed, tincture benzoin may be applied, or the following:

R

Balsami peruciani	
Olei ricini	aa fl. ʒi

In all cases, it is advisable to made a smear of the anal and perianal skin preferably by means of a cellophane glass rod. Culture of the organisms and subsequent injections may effect a cure. On this subject, Dr. Jelks speaks with authority.

Injection Methods. As is well known, alcohol possesses a destructive effect on the nerve structures and for this reason has been employed in the treatment of pruritus ani. More than two decades ago, Stone[23] advocated the subcutaneous injection of 95 per cent grain alcohol to destroy the terminal sensory filaments that supply the diseased area. In a few hundred instances we have employed varying strengths and amounts of alcohol and although many sequelae have been encountered such as abscess, necessitating free incision and drainage on one or more occasions, and protracted convalescence our conclusions are that it is the best means toward the eradication of this distressing syndrome.[25] Under sacrocaudal or sodium pentothal anesthesia, the parts are thoroughly prepared, and 40 to 60 cc. of alcohol 47.5 per cent are injected subcutaneously around the sphincter muscle. Other preparations and solutions such as hydrochloric acid[26], benacol[27], distilled water[28], quinine and urea hydrochloric[29], and anucaine may be employed.

The hypothesis of Besredka[30] as applied to the pruritic syndrome entails the taking of cultures from the anal and perianal region of patients suffering from pruritus. The débris or scrapings before and after sterilization are planted in hormone broth and incubated at 37.5 degrees Centigrade for 72 hours. After identification of the organisms, the culture is passed througn the Berkefeld filter and the antigen completed by the addition of 3 drops of tricresol 0.1 per cent solution, as a preservative. The prepared autogenous vaccine is injected intradermally and subcutaneously into the pruritic area after cleansing of the surface with alcohol. Initially, $\frac{5}{8}$ minim is introduced and the dose gradually increased until 16 minims (1 cc.) are given. Injections are given every third day. Two to four areas are treated at each sitting. The writer instituted this treatment a few years ago as previously reported[24].

The value of surgery in the treatment of pruritus ani is indeed problematic. Certainly it should be resorted to only after co-existing pathology has been corrected and at least one or even two forms of the injection treatment have been given a fair trial. The operative means of combating pruritus ani confines itself to (1) the removal of the diseased skin; (2) severance of the sensory nerve filament supplying that skin; and (3) division of the peripheral nerves following their identification by means of a faradic current.

Probably the most popular is the Ball procedure or one of its modifications. In all, the pruritic skin is "undercut" widely to sever the sensory nerves.

Probably the most fascinating disease entity drawn to our attention during the past decade and a half is lymphogranuloma inguinal or lymphopathia venereum. To us, it is of especial interest by virtue of the fact that the vast majority of inflammatory strictures of the rectum, and esthiomene of the anoperineal and anovulvar region, are due to the filterable virus of lymphogranuloma venereum. Stricture of the rectum is an organic narrowing of the lumen of the bowel by fibrous tissue involving the mucous membrane, submucosa and muscular coat, characterized by progressive constipation, tenesmus and mucopurulent discharge. As to sex, rectal manifestations are more common in the female because of the distribution of the lymphatic network. The condition is more frequent between the ages of 17 and 40, or the period of greatest sexual activity. Also there is a marked preference for the colored race. In our series of 852 cases, of which 559 were negroes, there were 648 rectal strictures.

It should be borne in mind that the ininflammatory process may attack any layer of the rectum or the tissues outside its wall. If it comes from within, the irritation results in erosion of the mucous membrane, upon which infection is superimposed. With continuation of the etiologic irritant, the inflammatory process becomes subacute and finally chronic in nature, so that the various layers of the rectum and tissues outside its wall are gradually involved by continuity and contiguity of structure. As a result of this chronic inflammation, much young fibroblastic tissue is deposited in the submucosa as well as in the other coats, which gradually leads to thickening of the visceral wall. This in itself tends to encroach on the lumen of the rectum. By subsequent contraction of the maturing fibroblastic tissue this thickening becomes markedly increased, so that there eventually results a firm, inelastic, permanent narrowing, to which the term stricture is applied.

On the other hand, if the initial focus is outside the rectum, as the writer believes is more frequently the case, the extramural network of lymphatics becomes invaded. As the inflammatory process gradually becomes chronic, the mural tributaries, i.e., the intermural and intramural groups, are invaded by extension. As a result of the inflammatory process, fibrous tissue is deposited in the various layers of the rectum so that thickening occurs which brings about narrowing of its lumen. As the process continues and additional fibroblastic tissue is deposited, subsequent contraction ensues, so that finally an organic stricture is formed. Erosions of the mucous membrane are noted, followed by ulcerations, so that the surrounding mucosa appears altered and somewhat lusterless[31]. To the touch, the involved area is thick and firm, while later it feels leathery, with loss of elasticity and distensibility. It is more or less irregular, markedly thickened, and the mucous membrane is found to be adherent to the tissue beneath. In the deeper layers of the stricture, fibrous tissue is seen involving all the coats of the rectum, although the greatest amount of involvement is in the submucosa. Fistulous tracts may be found passing through the perirectal tissues to adjacent structures, as the bladder, urethra, vagina, or through the skin. Ulceration is usually marked and occurs early. The discharge is frequently abundant, mucopurulent, and often sanguineous. Ulceration rarely exists at the level of the stricture except in the tubular variety, which is seen routinely through the stricturoscope and at autopsy.

A history of constant soiling by feces, blood, and pus is suggestive of an inflammatory stricture, especially when cited by a colored female between the ages of 20 and 40. Although the diagnosis by inspection is not absolute, it offers to the careful observer a very good idea of the pathology present. Not infrequently, the region about the anus is moist and glued together by the thick mucopurulent discharge. Upon separation of the buttocks, fecal matter mixed with blood and pus may be seen seeping through the anal orifice. Hypertrophied skin tags, condylomas of various sizes, and one or more fistulous openings are not uncommon. Since approximately all inflammatory strictures of the rectum are within reach of the finger, the diagnosis should not be difficult. As the gloved finger is inserted into the anal canal, some degree of muscular relaxation will be noted in long-standing cases, due to fatigue of the external sphincter, yet gentleness should attend this procedure, since pain and discomfort are not unusual. As the finger is advanced, the stricture will be felt as a firm inelastic narrowing, usually involving the entire circumference of the rectum. If the lumen of the stricture is of sufficient size to admit the tip of the index finger, the finger usually can be passed to its entire length. However, such introduction should be attended by great care, since forcible insertion not only causes pain but is dangerous, because the diseased tissue is so friable that hemorrhage and perforation may ensue. Through an ordinary proctoscope the stricture, or, in the case of the tubular variety, the lower border of the stricture, is noted by its pale, leathery, and thickened appearance.

In each case, especially if the stricture is located in the sigmoid or at a high level in the rectum, roentgenograms should be taken after an opaque enema. In this way the irregular deformity will be noted.

Frei Test: In 1925, Frei[32], of Berlin, introduced a specific cutaneous test for this disease which has proved of distinct diagnostic value in inguinal adenopathies and anorectal syndromes.

Technic: One-tenth (0.1) cc. of the antigen is injected intradermally into the arm of the patient. The reaction, which reaches its maximum from 48 to 72 hours after the injection, is then read. A positive test is characterized by the appearance of a hard red papule around which may be noted an erythematous ring. In some cases, especially where stronger dilutions are used (1 to 5 or 1 to 2), pustule formation is more prone to occur, as shown by a central area of necrosis. Reactions that are strongly positive are considered specific, while those that are weakly positive or difficult to interpret should be repeated.

The material for the test is obtained from patients with lymphopathia venerea as proved by a positive Frei test, using a known positive antigen. To prepare the antigen, either the pus or tissue may be utilized. Buboes that are unopened and present areas of fluctuation are preferable for obtaining purulent material. The writer has used successfully tissue from the anovulvar region of patients showing an esthiomenus process, fragments of rectal stricture, and pus from perirectal abscesses and fistulas occurring in cases with a positive Frei test[33].

Preparation of Frei Antigen—After the addition of physiologic salt solution as a diluent, the material collected is heated on a water bath at 140° Fahrenheit (60° Centigrade) for 2 hours 1 day and 140° Fahrenheit (60° Centigrade) for 1 hour the second day. Tests for sterility are performed on aerobic and anaerobic culture media and if found sterile, the material is sealed in a sterile ampoule ready for use. The antigen is now tested on known positive cases of lymphopathia venerea as previously determined by giving positive Frei reactions.

Control: In order to evaluate the test properly, a control antigen obtained from normal glands of patients not affected with lymphopathia venerea may be used. A sterile solution of leukocytes has been utilized also. The material is diluted with physiologic salt solution as in the preparation of the specific antigen, after which 0.1 cc. is injected into the forearm of the patient. It has been the writer's custom to inject the Frei antigen in the left forearm and the control in the right in order to avoid incorrect readings. When the control test is noted (at the time the Frei reaction is read, 48 to 72 hours after injection) no elevation, pustule or erythematous zone should be present. Such constitutes a negative control test. Ordinarily, male patients with this disease who present inguinal buboes will show a positive Frei reaction if tested one week following onset of the adenitis, although the usual time is two weeks to two months.

In every case effort must be made to ascertain the cause and any influencing factors in order that treatment may be instituted accordingly. For instance, if the Wassermann reaction is positive, proper antiluetic treatment should be given, even though it has no effect on the fibrotic stricture; if the patient is tuberculous, measure should be directed to this angle. Attempt should be made to build up the constitution of the patient, since there are usually varying degrees of weakness and loss of weight. The diet should be nutritious and composed of foods which leave but little residue. Instillations of ichthyol, 2½ to 5 drams (10 to 20 cc.) of a 25 per cent aqueous solution, twice daily are soothing to the mucous membrane and will assist in diminishing tenesmus. Irrigations of hot water 110° Fahrenheit (43.3° Centigrade), potassium permanganate, 1:1000, or S.T. 37 (hexylresorcinol), 1:8, once or twice daily will tend to cleanse and heal the inflamed mucosa. For topical applications to the ulcerated areas, silver nitrate, 5 to 10 per cent, metaphen, or parathiocresol, 50 per cent, may be employed. Bleeding areas will often respond to a saturated solution of potassium permanganate. Easy passage of stools is facilitated by the administration of liquid petrolatum, ½ to 1 ounce (15 to 30 cc.), night and morning as indicated.

Perirectal Denudation: The procedure as outlined by Jelks[34] is indicated in strictures above the anus and below the peritoneal reflection which are due to residual and transudative infection in and about the rectal wall. Especially in the gonorrheal type, Jelks cautions against operative intervention except in the quiescent stage, which in part may be determined by the sedimentation test. Ulcerations should be treated before and after operation by irrigations and topical applications as enumerated under medicinal treatment.

Of 51 operations performed by the writer and his associates, 24 of which have been reported[35], the general results seem to be most encouraging in the low-lying annular and very short tubular strictures.

Perineal excision preceded by a permanent colostomy is applicable for all variations of stricture of the rectum. The procedure recommends itself because it is not so formidable as are the various abdominoperineal operations, which carry an operative mortality far greater than that encountered in extirpation for malignancy as previously reported by the author[36]. Twenty-four cases of rectal stricture were treated by this means without a death. More recently we have employed Babcock's proctosigmoidectomy and while the mortality has been nil the series is too small to cite.

BIBLIOGRAPHY

1. Murietta, A. J.: A new technic in correcting rectal prolapse. Trans. Amer. Proctol. Soc., 1938, p. 141.
2. Bacon, H.E.: Anorectal operative procedure with special reference to the avoidance of pain. Jour. Amer. Med. Assn., 116:363 (Feb. 1) 1941.
3. Bacon, H. E.: Improved technic of hemorrhoidectomy. Read before National Gastroenterological Assn. (May) 1941.
4. Bacon, H. E.: A new method in the surgical treatment of hemorrhoids. Jour. New Jersey State Med. Soc., 38:636, 1941
5. Bacon, H. E., and Lindig, H. C.: Lumbar analgesia in anorectal surgery. Trans. Amer. Proctol. Soc., p. 253, 1940.
6. Bacon, H. E.: Lumbar analgesia in anorectal surgery. Anes. and Analg. 20:333, 1941.
7. Bacon, H. E.: Anus, Rectum and Sigmoid Colon, 2nd Edition Phila, p. 764, J. B. Lippincott, 1941.
8. Bacon, H. E., and Sealy, B. W.: Malignancy of the anus, rectum and sigmoid colon in the young. Amer. Jour. Surg., 45:339, 1939.
9. Bacon, H. E., Wolfe, J. D., and Archambault, R. A.: Rectal Malignancy in Youth: Report of two cases. (Process of Publication).
10. Westhus, H.: Die Pathologisch - Anatomischen Grundlagen der Chirurgie des Rectumkarzinoms. p. 78, 1934.
11. Gilchrist, R. G., and David, V. C.: Lymphatic spread of carcinoma of the rectum. Amer. Surg., 108:621, 1938.
12. Miles, W. E.: Cancer of rectum London, 1926, Harrison and Sons, p. 8.
13. Simpson, W. C., and May, C. W.: The mural penetration of the carcinoma cell in the colon. Surg. Gynec. & Dbst., 68:872, 1939.
14. McVay, J. R.: Involvement of lymphnodes in carcinoma of rectum. Amer. Surg., 76:755, 1922.
15. Dukes, C. E.: The classification of cancer of the rectum. Jour. Path. and Bacteriol., 35:323, 1932.
16. Rankin, F. W., and Broders, A. C.: Factors in-

fluencing prognosis in carcinoma of the rectum. Surg. Gynec. Obst., 46:660, 1928.

17. Gabriel, W. B., Dukes, C., and Bussey, H. J.: Lymphatic spread in cancer of the rectum. Brit. Jour. Surg., 23:395, 1935.
18. Bacon, H. E., and Gilbert, M.: Sites of metastasis from carcinoma of the rectum and sigmoid colon. Jour. Amer. Med. Assn., 111:219 (July 16) 1938.
19. Cole, P. P.: The intramural spread of rectal carcinoma. Brit. Med. Jour., 1:431, 1913.
20. Grinnell, R. S.: The grading and prognosis of carcinoma of the colon and rectum. Am. Surg., 109:500, 1939.
21. Babcock, W. W.: Carcinoma of rectum. One stage, simplified proctosigmoidectomy with formation of perineal anus. Surg. Clin., 12:1397, 1932.
22. Terrel, E. H., and Shaw, F. W.: Observations on fungal injections of perianal skin and rectum. South. Med. Jour., 21:887, 1928.
23. Stone, H. B.: A treatment for pruritus ani. John Hopkins Hosp. Bull., 27:242, 1916.
24. Bacon, H. E.: Preliminary report of Besredka theory of local immunization as applied to pruritus ani. Procto. Soc. Grad. Hosp., Univ. Penn., 1934.
25. Bacon, H. E.: Pruritus ani. Cyclopedia Medicine, Vol. XIII, Phila. F. D. Davis, p. 539.
26. Hanes, G. S.: Pruritus ani, pruritus vulvae and rectal prolapse. Trans. Amer. Proc., 28:114, 1928.
27. Yeomans, F. C.: Gorsch, R. V., and Mathesheimer, J. L.: Benecol in the treatment of pruritus ani. Trans. Amer. Proc. Soc., p. 24, 1927.
28. Bacon, H. E.: Pruritus ani. Preliminary report of 123 cases using distilled water. Amer. Jour. Digest. Dis. & Nutrit., 4:109, 1937.
29. Hirschman, L. J.: Handbook of Disease of the Rectum. 4th edition. 1926. C. V. Mosby & Co., St. Louis,p. 173.
30. Besredka, A.: Local immunization. Williams Wilkins and Company, Baltimore, 1927.
31. Bacon, H. E.: Inflammatory stricture of rectum. Cyclopedia of Medicine. Vol. XIII, F. D. Davis & Co., Phila., p. 511.
32. Frei, W.: Eine neue Hautreaktion bei Lymphogranuloma inguinale. Klin. Wochenschr., 4:2148, 1925.
33. Bacon, H. E.: What supportive evidence is there that lymphogranuloma venerea is a distinct disease entity? Virginia Month. M. J., 65:147, 1938.
34. Jelks, J.: A new method for rectal stricture. Trans. Amer. Proctol. Soc., 1931, p. 19.
35. Bacon, H. E., Schofield, J. D., and Murray, F. H.: Rationale of the Jelk's operation in stricture of rectum. Preliminary report of 24 cases. Trans. Amer. Proctol. Soc., 1934, p. 166.
36. Bacon, H. E.: Surgical treatment of lymphogranulomatous stricture of the rectum. South. Med. Jour., 34:31, 1941.
37. Babcock, W. W.: The diagnosis and treatment of carcinoma of the colon with especial reference to a method of perineal colostomy. Texas State Jour. Med., 28:515, 1932.

A preacher was being heckled and razzed by fellow members of a service club. A visitor asked him how he could maintain his poise under the circumstances. "Oh, that's easy," he said, "You see, I'm chaplain of a lunatic asylum, and I'm used to this sort of stuff."

Cavernous Sinus Thrombophlebitis*

LeROY A. SCHALL, M.D.
From the Department of Otolaryngology, Massachusetts Eye and Ear Infirmary
BOSTON, MASS.

SEPTIC THROMBOPHLEBITIS of the cavernous sinus has been and still is one of the most fatal complications of otolaryngology. Its course is dramatic. Starting from an infection, usually staphylococcic, of the anterior nares, the tip of the nose, the upper lip, the mastoid, the tonsils or the teeth, all too often caused by a pulling of a vibrissae or the squeezing of a pimple, it runs a rapid and usually a fatal course. From the original site of infection, a retrograde thrombophlebitis carries the infection to the cavernous sinus, where in rapid sequence the patient, in the typical picture, presents edema of the eyelids, first one and then the other; exophthalmos, first unilateral, then bilateral; septicaemia; meningitis; coma and death.

"The cavernous sinuses[1] are so named because they present a reticulated structure, due to their being traversed by numerous interlacing filaments. They are of irregular form, larger behind than in front, and are placed, one on each side of the sella tursica, extending from the sphenoidal fissure to the apex of the petrous portion of the temporal bone. Each cavernous sinus receives anteriorly the superior ophthalmic vein through the sphenoidal fissure, and opens behind into the petrosal sinuses. On the inner wall of each sinus is the internal carotid artery, accompanied by filaments of the carotid plexus and by the abducens nerve; and on its outer wall, the oculomotor, the trochlear, the ophthalmic, and the superior maxillary division of the trigeminal nerve. These parts are separated from the blood flowing along the sinus by the lining membrane, which is continuous with the inner coat of the veins. Each cavernous sinus receives some of the cerebral veins, and also the sphenoparietal sinus. It communicates with the lateral sinus by means of the superior petrosal sinus; with the internal jugular vein through the inferior petrosal sinus and through a plexus of veins on the internal carotid artery; with the pterygoid plexus through the foramen ovale, and with the angular vein through the ophthalmic vein. The two sinuses also communicate with each other by means of the circular sinus."

Eagleton[2] in his classic description of cavernous sinus thrombosis classifies the routes of extension as:

1. Ophthalmic (anterior) from infection of the lip, eyelid, nasal orifice, teeth, tip of the nose, or the anterior part of the mouth.
2. Pterygoid (anterior-inferior) from infection from foci in the posterior teeth, jaw or maxillary antrum, less frequently in the pharynx or tonsils.
3. Sphenoid (mesial) from caries of the sphenoid or from a thrombosis of the veins that pass through the sphenoidal roof.
4. Aural (posterior) from thrombosis of the inferior petrosal.
5. Tonsillar (posterior-inferior) from infection through the pterygo-maxillary fossae, by way of an ascending thrombophlebitis of the jugular vein.
6. Carotid venous plexus (anterior) with direct infection into the lumen of the cavernous sinus.

That there are two types of thrombosis of the cavernous sinus, the one septic and the other sterile, has been accepted clinically and proved at autopsy. My discussion will be limited to the septic type exclusively.

To establish the diagnosis of septic thrombophlebitis of the cavernous sinus, Eagleton[2] proposed the following diagnostic criteria:

1. A known site of infection.
2. A blood stream infection.
3. Early signs of venous obstruction.
4. Involvement of the nerves in the sinus.
5. Neighborhood abscess of the soft parts.
6. Symptoms of complicating disease.

The symptoms[3] due to venous obstruction are exophthalmos, edema of the eyelids and of the bridge of the nose, chemosis of the bulbar conjunctiva, some edema of the retina, dilatation and tortuosity of the retinal veins, retinal hemorrhages, and at times slight choking of the disc. According to Chisholm and Watkins[4], when the pterygoid plexus is occluded along with the cavernous sinus there may be unilateral edema of the pharynx or of the tonsil.

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The symptoms[3] due to involvement of the cranial nerves are ptosis, dilatation of the pupil, paralysis of the abducens nerve, restriction of the movements of the eyeball, loss of vision, pain in the region supplied by the ophthalmic branch of the fifth cranial nerve and rarely, trismus.

The symptoms[3] of sepsis are a fluctuating temperature, a rapid, small and thready pulse; chills and sweats, frequently vomiting, delirium and coma.

In the past ten years 16 cases of septic cavernous sinus thrombophlebitis and one case of a sterile thrombosis of the cavernous sinus, were seen at the Massachusetts Eye and Ear Infirmary. Of the 16 septic cases, three recovered as well as the one with a sterile thrombosis. Prior to 1940 no patient with a septic thrombosis of the cavernous sinus recovered. Of the 13 deaths the diagnosis was confirmed by autopsy in 12.

TREATMENT

Previous to the advent of chemotherapy Eagleton[2] was able to report but three recoveries by surgical methods out of 25 cases. Browder and Myerson[5] had a recovery after introducing a sterile clot proximal to the infection. Grove[3] surveyed the literature and came to the conclusion that septic thrombophlebitis of the cavernous sinus was practically 100 per cent fatal. Since the introduction of chemotherapy isolated case reports of recovery are beginning to appear in the literature. Barnshaw,[6] Seydell[7] and Pace[8] each report a recovery following the use of sulfanilamide and Morrison and Schindler[9] one after the use of sulfapyridine. Recently Connell and Trowbridge[10] reported on seven cases treated with chemotherapeutic agents combined with staphylococcic antitoxin. In their series there were five recoveries and two deaths.

Last May, I reported[11] on three cases of acute fulminating thrombophlebitis of the cavernous sinus treated with chemotherapeutic drugs and heparin. These cases recovered. Since then I have seen another patient whose death occurred before full treatment could be started.

That heparin is an important adjunct in treatment is demonstrated by Case 2, in whom the cavernous involvement developed while the patient was under treatment with chemotherapeutic agents for a nasal furunculosis.

The use of heparin in conjunction with chemotherapeutic agents was suggested to me by Dr. Champ Lyons of the Massachusetts General Hospital, and the treatment of these three patients was carried out under his direction. The first two cases have been reported by Lyons[12]. To the best of our knowledge, these cases of septic thrombophlebitis of the cavernous sinus were the first in which therapy with these agents was given.

In discussing the use of heparin, Bancroft[13] speculates: "For the septic processes occurring in association with otolaryngology, it would seem advisable to combine chemotherapy with heparin. The combination of the sulfanilamide group and heparin should aid in prevention of spread of septic emboli and in stabilization of the clot when it is impossible to ligate the vein proximally."

Heparin is a strong organic acid, probably a mucoitin trisulfuric acid, discovered and described by Howell[14]. It was first isolated from liver, and investigations gave support to the view that it is a normal constituent of the blood plasma. Improved methods of extraction and purification by Howell[15], by Charles and Scott[16], and by Schmitz and Fisher[17], have rendered heparin safe to use in man.

Early experiments showed that heparin has a distinctive effect in preventing the coagulation of the blood. Howell advanced the theory that it is the inhibiting factor responsible for the fluidity of the blood, that it is not an antithrombin but that it prevents coagulation by a reaction with prothrombin, which interferes with the activation of prothrombin to thrombin. Murray[18] reached the deduction that heparin also has an important effect on blood platelets in that it prevents their clumping and thereby prevents thrombosis.

Heparin has now been used in many conditions in which thrombosis is a factor—surgery of blood vessels[19], venous grafts[20], embolectomy[21], periphlebitis[13], malignant endocarditis[22], and sudden vascular occlusion[13].

Heparin is administered by a constant intravenous saline drip. Usually 1.000 units of heparin, i.e., 10 mg.. is added to each cc. of saline solution. The saline and heparin is permitted to run into the patient's vein at such a rate that the clotting time of the patient's blood is maintained at the desired level. In these cases the clotting time of the blood was maintained at about ninety minutes as determined by the five tube method.

REPORT OF CASES

CASE 1. A woman aged 31, seen in consultation with Dr. Vincent J. Kelly on April 5, 1940, had a nasal furuncle of five days' duration and had received small doses of sulfanilamide at home for three days.

With the development of the signs and symptoms of cavernous involvement, Dr. Kelly was called and the patient was admitted to the Massachusetts Eye and Ear Infirmary.

On examination the patient was irrational, the temperature was 104.3 F. and there was exophthalmos of the right eye and edema of the bridge of the nose and both right eyelids. There was a discharging furuncle of the right naris, and the frontal veins were palpable.

On entry the treatment consisted of intravenous heparin and sulfapyridine. When the blood culture showed the infecting organism to be staphylococcus albus, sulfathiazole was substituted for the sulfapyridine. The patient's course was stormy, developing by the thirty-fourth hospital day symptoms and signs of meningitis, confirmed by lumbar puncture.

During the course of the disease the patient developed a partial paralysis of the third nerve and a complete paralysis of the fourth nerve on the right.

The bleeding time was kept at an average of ninety minutes for 17 days—a total dosage of 225,000 units of heparin was given. On entry the white blood count was 22,000 and the count remained near 20,000 for ten days and then gradually after two transfusions returned to normal. The sulfapyridine level averaged 12 mg. per cent, the sulfathiazole 6 mg. per cent.

At the end of the seventy-seventh hospital day the patient was discharged home but chemotherapy was continued for a total period of four months, at the end of which time the spinal fluid protein had returned to normal.

CASE 2. A man aged 41, an engineer, entered the Massachusetts Eye and Ear Infirmary May 14, 1940, with a diagnosis of acute frontal sinusitis of one week's duration. Physical examination revealed a nasal furunculosis, and the diagnosis of acute sinusitis was not supported. On entry he was started on sulfapyridine therapy, and by the fourth hospital day exophthalmos of the right eye and edema of the eyelids and bridge of the nose developed, with frontal veins.

Heparin was started on the fourth day and stopped on the nineteenth after a total of 580,000 units. During the course of the disease involvement of the sixth and the first division of the fifth cranial nerve developed. Sulfathiazole was substituted for sulfapyridine on the eleventh hospital day because blood cultures showed staphylococci.

Sulfathiazole was given for three months, at the end of which time the spinal fluid protein was normal. The patient still has a residual hyperesthesia of the left frontal region.

CASE 3. A boy aged 9 years, referred to me on January 7, 1941, by Dr. Charles W. Geddes with a diagnosis of cavernous sinus thrombosis, was awakened from sleep three days before entry by a pain in his nose with some swelling of the face. His father noticed a small elevated area inside the left nostril. Under flaxseed poultices, the swelling became worse and a furuncle in the nose broke and discharged.

On admission to the hospital there was exophthalmos and edema of the right eyelid and bridge of the nose. The temperature was 102° F., and there was headache, with stiffness of the neck and a slight Babinski reflex on the right side. The patient was drowsy, and blood cultures were positive for staphylococci. The patient was placed under the care of Dr. Lyons, and the hospital record can be summarized as follows:

First hospital day: Heparin 20,000 units given with sulfathiazole. Slight bleeding from nose.

Second hospital day: Sixth nerve paralysis.

Third hospital day: Involvement of the first and second division of the fifth nerve.

Ninth hospital day: Heparin stopped.

Tenth hospital day: Lumbar puncture done. Fluid crystal clear. Initial pressure 125.

Eighteenth hospital day; Patient up in chair.

Twenty-fourth hospital day: Sulfathiazole stopped.

Twenty-eighth hospital day: Temperature rose to 100.8° F. Pain on coughing; lumbar puncture, no increase in pressure—clear fluid, one cell.

Twenty-ninth hospital day: Sulfathiazole started again; temperature 102° F.

COMMENT

Lyons[12] states: "There is reason to believe that staphylococcal bacteremia usually arises from foci of septic thrombophlebitis in and around areas of suppuration. Such a conception indicates that the attack upon any staphylococcal bacteremia should attempt to prevent the extension of septic thrombi as well as to destroy the bacteria."

It is contended not that heparin has any influence on a thrombus that has already formed but that, by increasing the fluidity of the blood, it may prevent the extension of that thrombus. Sterilization of the blood and the thrombus converts a septic process into an aseptic one, so that the combination of these drugs seems to be indicated.

Since the recovery of these three cases of septic cavernous sinus thrombophlebitis of the anterior type, by the use of heparin and chemotherapeutic drugs, this method of therapy has proved successful in the treatment of six similar cases.

Last May, I stated that sulfathiazole was our drug of choice but that experimental evidence seemed to indicate that sulfadiazine would be the drug of selection. This prediction was substantiated by the experience of a patient in Winsted, Conn., who failed to improve until sulfadiazine was substituted for sulfathiazole.

CONCLUSION

Since reporting the recovery from septic cavernous sinus thrombophlebitis in three cases following the use of chemotherapeutic agents and heparin, I have been consulted on six different cases of the same disease. With appropriate treatment these six patients have recovered, making a total of nine cases.

The recovery of nine patients who presented a symptomatology that fulfills Eagleton's diagnostic criteria of septic cavernous sinus thrombophlebitis changes the prognosis of a disease that was formerly considered 100 per cent fatal to one having some hope of cure.

The lesson taught by these cases is that infection of the lip or tip of the nose is a particularly dangerous infection and under no circumstances should it be squeezed or traumatized.

REFERENCES

1. Gray's Anatomy—Spitzka Edition. Lea and Febiger, Phila., 1913. pp 724.
2. Eagleton, Wells P.: Cavernous Sinus Thrombophlebitis. Macmillan Co., New York.1926.
3. Grove, W. E.: Septic and Aseptic Types of Thrombosis of the Cavernous Sinus. Arch. Otolaryng. 24:29-50. (July) 1936.
4. Chisholm, J. Julian and Watkins, J. Sheldon: Twelve Cases of Thrombosis of the Cavernous Sinus. Arch. Surg. 1:483 (Nov.) 1920.
5. Browder, Jefferson and Myerson, M. C.: A Surgical Method for the Prevention of Thrombophlebitis of the Cavernous Sinus. Arch. Otolaryng. 21:574 (May) 1935.
6. Barnshaw, H. P.: Report of a Case of Bilateral Cavernous Sinus Thrombosis: Recovery without Operative Intervention. J. M. Soc. New Jersey. 36:22 (an.) 1939.
7. Seydell, E. M.: Recovery from Thrombosis of the Cavernous Sinus. Arch. Otolaryng. 30:429 (Sept.) 1931.
8. Pace, Errett: Thrombosis of the Cavernous Sinus. Arch. Otolaryng. 33:216 (Feb.) 1941.
9. Morrison, Lewis F., and Schindler, Meyer: Cavernous Sinus Thrombosis: Report of Recovery Following Sulfapyridine Therapy. Arch. Otolaryng. 31:948 (June) 1940.
10. Connell, Evans S. and Trowbridge, Barnard C., Jr.: Missouri State Med. Asso. (Sept.) 1941. pp. 320-324.
11. Schall, LeRoy A. Treatment of Septic Thrombophlebitis of the Cavernous Sinus." J. A. M. A. Vol. 117 (Aug. 23, 1941) pp. 581-584.
12. Lyons, Champ: The Treatment of Staphylococcal Cavernous Sinus Thrombophlebitis with Heparin and Chemotherapy. Ann. Surg. 113:113 (Jan.) 1941.
13. Bancroft, Frederic W.: Use of Anticoagulants in Cases of Postoperative Thrombosis and Embolism, Arch. Otolaryng. 32:934 (Nov.) 1940.
14. Howell, W. H.: Two New Factors in Blood Coagulation—Heparin and Proantithrombin, Am. J. Physiol. 47:328 (Dec.) 1918.
15. Howell, W. H.: The Purification of Heparin and Its Presence in Blood, Am. J. Physiol. 71:553 (Feb.) 1935.
16. Carles, A. F. and Scott, D. A.: Studies on Heparin: IV. Observations on the Chemistry of Heparin, Biochem. J. 30:1927-1933 (Oct.) 1936.
17. Schmitz, Adolf, and Fischer, Albert: Ueber die Chemische Natur des Heparins: II. Die Reindarstelling des Heparins. Ztschr. f. physiol. Chem. 216:264-273 (May 3) 1933.
18. Murray, D. W. G.: Jaques, L. B.; Perrett, T. S.: and Best, C. H.: Heparin and Thrombosis of Veins Following Injury. Surgery. 2:163 (Aug.) 1937.
19. Murray, D. W. G.: Heparin in Surgical Treatment of Blood Vessels. Arch. Surg. 40:307 (Feb.) 1940. Murray, Jacques, Perrett and Best. Bancroft, Murray and Best.
20. The Present Situation. J. A. M. A. 110-118 (Jan. 8) 1938. Bancroft and Murray.
21. Murray (18). Murray and Best (19).
22. Kelson, Saul R., and White, Paul D.: A New Method of Treatment of Subacute Bacterial Endocarditis. J. A. M. A. 113-1700. (Dec. 4) 1939.

Diagnosis of Allergy in Otolaryngology and Rhinology*

C. H. GLOVER, M.D.
MEMPHIS, TENN.

IN THE BEGINNING of these remarks, I would like to say that, by some physicians, allergy is belittled in every possible manner but, in my opinion, this attitude is due to lack of information and understanding of the subject. Allergy is a science in its infancy and like other branches of medicine, is not without its weak points; it is somewhat in advance of the practice of medicine and surgery of many years ago when calomel and quinine were the principal drugs used and appendicitis was the belly-ache from consumption of green apples.

In many instances to the otolaryngologist and rhinologist the possibility and probability of allergic phenomena is a most important factor in his method of procedure and to overlook this fact may lead to a bad end result. It is my firm belief that allergy is more important to the otolaryngologist and rhinologist than any other branch of medical science and should be seriously considered as a possible etiological factor in many conditions with which he is confronted.

The early diagnosis of allergic conditions in this field of endeavor is very necessary to a good end result; it is very destructive to nasal mucosa and particularly so to that of the nose, sinuses, naso-pharynx and bronchial tubes. In the very early stages of nasal allergy the mucous membranes are red and edematous, accompanied by itching, sneezing and watery discharge, which condition is more often diagnosed as head cold. In the more advanced cases the mucosa becomes pale, more chronically edematous, the discharge thicker and more tenacious, with the turbinates occupying the greater part of the nasal cavities, and it is natural to suppose that the sinuses suffer similar pathological changes due to the fact that the mucous membrane of the nose is continuous with that of the sinuses.

Advanced nasal allergy in all instances affects the sinuses in one way or another; this may be from a slight thickening of the lining membrane to a complete filling of the cavity by polypoid formation. These cavities, sooner or later, become infected by the ordinary bacteria of the air passages and the result often is mistaken for a primary infection and dealt with accordingly, which only serves as temporary relief.

It has been my practice to eliminate allergic conditions in all frequent attacks of acute rhinitis as well as recurrent attacks of sinusitis which most often follow this condition.

Due to the thick mucous discharge from the sinuses, nose, naso-pharynx and pharynx gravitating into the trachea and bronchial tubes it is not uncommon to find upon x-ray examination a peri-bronchial thickening with caseous deposits, accompanied by a productive cough, loss of considerable weight and interpreted as tuberculosis. A microscopical examination of the allergic nasal secretions will show a constant eosinophilia. A very thorough history will also be of great value in differentiating these conditions and is most important in every case of allergy not only to the otolaryngologist and rhinologist, but in general medicine as well.

The diagnosis is not a difficult matter if one is fortunate enough to find obvious allergic conditions in his patient, but if the symptoms with which he is dealing are not outstanding the diagnosis may be much more difficult.

In many instances mild reactions to the testing extracts may be just as important as those of greater severity and by no means should one limit his treatment to the more severe reactions. Skin hypersenitivity varies in many instances with the length of the existing disease and is not always the answer to this malady, but for the present it is the most important method by which we are to base our diagnosis and treatment and until such time as very exhaustive effort is made by those so equipped and inclined, we will be compelled to accept this as the most important procedure in combatting this disorder. In the great majority of instances, a high percentage of good results is obtained with this method.

In seasonal pollinosis or in perennial nasal allergy it is well to note the extent of rhinorrhea. Renkel states that in true pollinosis there are explosions of sneezing with associated nasal stiffness without rhinorrhea, but when associated with food idiosyncrasies there is abundant rhinorrhea. My experience does not permit me entirely to agree with him in this particular. I have found that in either event there is usually copious rhinorrhea, that of true pollinosis being thin and watery, while in association with food allergy the discharge is thicker, very tenacious and not infrequently streaked with blood and pus. It is true that rhinorrhea may be slight or absent in some instances of pollinosis of short duration, produced by heavier pollens which are not wind-borne under ordinary circumstances, but carried short distances by heavy winds, or the patient otherwise coming in direct contact with the pollen. In wind-borne pollen hypersensitivity there is usually abundant watery discharge and the condition is of much longer duration; this one fact will serve you well in differentiating between wind and insect-borne pollinosis.

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*Read before the Clarksdale and Six Counties Medical Society, March 11, 1942, Clarksdale, Miss.

It is an exploded theory that wind-borne pollen is the only offender in pollinosis, for it has been proved that many suffer attacks from heavier pollens which are considered only insect-borne. I have one patient who is sensitized to dogwood pollen, and having one in her yard close to her window she begins to sneeze as soon as the blossoms are fully developed. Only last season she sniffed a blossom and had three or four days sneezing with copious watery discharge with an associated conjunctivitis. She is also allergic to a few grasses and trees. Desensitization therapy to grasses and trees, being careful to keep the windows to her bedroom closed day and night, completely relieved all symptoms.

Vaughan also reports one patient sensitized to Mimosa pollen, which is one of the heavy pollens and usually considered harmless. It is true that desensitizing extracts to the heavy pollens is not necessary; a simple precaution of avoidance will give relief of symptoms.

Many sufferers of hayfever have associated asthmatic attacks; it is wise to bear in mind that the same offending agents may produce either or both conditions. Asthma, unlike hayfever, is much more difficult to relieve. The attacks are much more alarming and call for immediate relief. Administration of adrenalin chloride, in most every instance, will relieve the symptoms which may recur with the same severity in a very few hours, when more relief must be had. There being a limit to the administration of adrenalin chloride, the offending agent must be found and it is wise to attempt to find this agent before the onset of the attack, bearing in mind that this or other drugs used for relief may affect the reactions of your testing extracts.

Asthma is usually preceded by attacks of vasomotor rhinitis, bronchitis, sinus disease, hayfever or some upper respiratory infection. A thorough past, personal and family history in every case is very necessary to relief of symptoms: the time of year, original onset, whether attacks are produced under similar circumstances, whether worse in winter or summer, association with other allergic conditions, whether symptoms are accelerated by day or night, sudden changes of temperature, etc.

Baldwin states that fifty per cent of asthmatics date original onset following some respiratory infection. This observation is more or less conclusive evidence that bacterial invasion plays an important role in the allergic syndrome; while bacterial allergy is not entirely understood, this statement would lead one to believe that it is an agent of great significance as an etiologic factor in the production of asthma. However, it also may be very misleading and may be purely secondary to hypersensitivity to agents of exogenous origin, which serve to lower resistance of mucous membranes, allowing infection to occur coincidentally with the asthmatic attack. This, however, is yet to be proved.

Polyposis of the sinuses not infrequently occurs in repeated infections of the upper respiratory tract, Hansel states this condition should always be considered allergic until proved otherwise. My observation leads me to believe they are all allergic as I have never seen one otherwise.

It is a foregone conclusion that a high percentage of individuals is sensitized to food or other agents; these agents may or may not be affecting the individual but the possibility of trouble from this source must be borne in mind, and by a process of elimination one can determine a method of procedure which might be of benefit to all concerned.

Allergic manifestations are not always obvious; the location of obvious pathological changes may vary in the same individual but it is known that certain tissues serve to receive the brunt of the shock and are known as shock tissues. Why should this fact be overlooked in the formation of malignant tumors? After all, chronic irritation to tissue is a theory advanced as an etiologic factor in these, the thorn in the flesh of the medical profession since the beginning of time.

Practical Proctology*

M. W. HOLEHAN, M.D.
MEMPHIS, TENN.

IN ALL branches of medicine I know of no branch that is more neglected by the doctor and the patient than the different diseases of the rectum.

Whether this is due to the innate modesty of the patient who hates to tell her rectal complaints and thereby be examined or to the doctor who too often listens to his patient complain of diarrhoea, constipation, flatulence, pain, indigestion, backache but prescribes without making a careful examination.

The physician is consulted by many patients whose localized pain, swelling, hemorrhage, tenderness or other symptoms, calls attention at once to the anorectal region and if he is a close observer with the proper instruments, a correct diagnosis can be made. Many other symptoms, however, of a more general character such as disturbances of digestion, menstruation and functions of the urinary organs, as well as headache, backache, sciatica, neuritis, arthritis, anemia and more remote evidences of disease will be entirely missed if the physician is not cognizant of the fact that their origin may be from the rectal and lower bowel region.

The principal symptom which above all brings the patient to seek relief, may be caused by many rectal lesions and is usually proportionate to the amount of sphincteric contractions excited. The pain associated with fissure is of a peculiar character and deserves special mention. It is gnawing and aching in type and usually comes on from a few minutes to an hour after stools. It may last but a short time and be of a mild type or it may last for hours and be of such intensity as entirely to incapacitate the patient. This pain is due entirely to spasm of the sphincter muscles and continues until the sphincter becomes exhausted and relief is obtained. To treat this condition the exciting cause, fissure or ulcer, must be removed by cautery or surgery and the spastic sphincter relieved either by rapid divulsion, cutting or injecting into it some long lasting anesthesia and then treating the wound until it has completely healed.

The pain from an infected crypt of Morgagni, those little pockets above the anorectal line which become infected and cause about 95 per cent of all rectal abscesses and fistulae, is not as acute as the fissure and anal ulcer pain. It is of a dull aching character, and often causes a low backache and a sense of weight in the rectum.

These abscesses can often be cured by touching up with silver nitrate, soothing ointments, massage and dilations of the rectum, but if the pain persists they can be removed in the office under local anesthesia with a bent silver probe and a pair of small sharp curved scissors.

The pain of anal papillitis, due to the inflammation of the anal papillae, those little sawtooth-like tits that are seen in the upper part of the anal canal when it is examined by the anoscope, is more of low aching, crawling or itching sensation, often making the doctor think the patient is infected with pin- or seatworms, and often giving the sensation of fullness as if he had to have a stool.

These may be treated by silver nitrate, diathermy or suppositories of ichthyol. Occasionally these papillae become hypertrophied due to long standing irritation and they may then prolapse out of the rectum causing sudden acute paralyzing pain due to the sphincteric spasm and the nerve injury to the papillae. In this case the base of the papilla can be cauterized under low heat to coagulate the blood supply and then snipped off without fear of hemorrhage.

The rectal abscess sufferer will complain of dull or acute throbbing pain which is constant and the intensity depends upon the size of the abscess and proximity to the sphincter—the nearer, the more the pain. It is worse before and during stool, with some relief afterward. The patient is more comfortable standing than sitting and when he sits down he will diagnose his case for you by the peculiar half-sitting posture that he assumes. This condition calls for immediate relief can be obtained by merely opening the abscess under a few drops of local anesthesia, but you have only relieved the pain and converted an abscess with an internal opening into a draining fistula.

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*Read before the semi-annual meeting of the North Mississippi Medical Society at Oxford, Miss., October 3, 1941.

If you are an internist or located where the proper surgical correction is impossible, then, under local anesthesia, decap the abscess so it will drain freely and insist that the patient seek an immediate operation; otherwise, the internal opening will continuously or intermittently discharge into the abscess cavity causing an excess of scar tissue and anal disfiguration. When the patient, by necessity, is forced to seek correction of the pathology, the operation, which in the acute stage would have been a relatively simple affair, becomes a major procedure with the sacrifice of important tissue that could have been saved earlier. No fistula operation is ever successful unless the internal opening is obliterated.

The pain from hemorrhoids depends upon their location and whether thrombotic, ulcerated or strangulated. The external thrombotic or inflamed skin fold which has a sensory nerve supply is very painful and the patient will complain of a tumor which appears suddenly after a stool movement, some unusual muscular effort or often complicates the latter months of pregnancy. The skin at the margin of the anus is elevated, red and at times oedematous. The pain is very intense should the clot be located within the sphincteric grasp and act as a foreign body. These tumors should be removed immediately to prevent infection, abscess and fistula formation. This can be done under a local anesthesia grasping the mass on top with a pair of forceps and making an elliptical incision radial to the anus; this leaves a flat denuded area which has very little pain and heals rapidly.

If the operation is refused, hot sitz baths, B & O suppositories and some soothing ointment may be prescribed. Internal hemorrhoids having a visceral or sympathetic nerve supply are not painful. A patient may have very large ones and unless they become ulcerated, thrombotic, bleeding or strangulated due to prolapse, he does not have any local symptoms. When pain is present it is due to infection spreading to the anal canal causing tenesmus.

Should the hemorrhoidal mass prolapse and get caught by an irritable sphincter, oedema soon sets in, thrombosis occurs and eventually gangrene, during which time the patient suffers greatly. The mass if seen early should be replaced in the rectum as soon as possible and an operation advised; if thrombosis or gangrene of the tissues has taken place an operation is then imperative.

You will recall that I said large hemorrhoids that do not have any of the above complications do not have any local symptoms, but the remote disturbances are truly astonishing. I have seen patients suffering with so-called indigestion and on a very restricted diet for years who after the operation were relieved of stomach symptoms and again ate normally. I have seen headaches, back and leg pains, prostate, bladder and nervous disorders respond to rectal surgery that previously had not been cured by other medications.

This can readily be understood when you realize that these hemorrhoidal tumors are masses of veins whose walls are diseased, thin and dilated, the blood flow is sluggish and bathed by the highly contaminated rectal flora, permitting an absorption from this pathological condition that can easily equal the damage done by diseased tonsils, teeth or sinus infection. In the treatment of hemorrhoids I believe we all agree that external ones should be removed surgically. Internal ones, due to lack of sensory nerves, admit most anything from a sclerosing injection to an electric needle without causing any particular pain to the patient, and charlatans have sprung up to fleece the gullible public out of millions of dollars each year. The sequelae of such treatments too often leave the patient with more pathological conditions than the original complaint.

If a doctor is going to do hemorrhoidal surgery I believe the excision and ligature, which I prefer, or excision and cautery method under a general anesthetic, are the methods of choice. At the same time all infected crypts, hypertrophied papillae and anal ulcers should be carefully removed, otherwise the operation from the patient's standpoint is a failure.

I think it would be well to say a few words about the pruritus ani sufferer. His symptoms may be from the mildest tickling sensation to an agonizing itching which is almost unbearable, and some few have committed suicide as a means of escape. This condition which I believe to be a low grade bacterial infection of the perianal skin, has as its origin one or more of the anal pathological manifestations the author enumerated previously in this paper. It should be remembered that itching and burning is frequently a complication of diabetes so this should be ruled out before attempting to treat the local parts.

It is my opinion that to cure a pruritus ani patient you must first relieve the perianal tissue of all infection, either by injecting subcutaneously some long lasting hyperemic anesthetic solution immediately to ease the itching, thereby stopping the patient from traumatizing the parts and letting the tissue become normal. To a certain extent this may be accomplished by therapeutic doses of x-ray.

The first step of the case has been attained when the skin becomes soft and pliable, free of all thickening, ulcers and excoriations and, above all, itching. The next step is to remove surgically all of the anal lesions which have acted as the port of entry for this perianal infection, and, if not done, all of your work will have been in vain. Experience has taught us not to operate on a rectum thus diseased because the wound will be very slow in healing, the scar tissue dense, often resulting in stricture, and the patient will have his pruritus ani.

Incidentally, pruritus ani is one of the hardest proctological problems to correct, and unless given much time and careful study the treatment is doomed to failure; but the patient who is cured will be the doctor's most enthusiastic booster in years to come.

Rectal and lower sigmoid polyps may not cause any subjective symptoms at all unless they have a long pedicle and prolapse out of the rectum and cause anal tenesmus. They may act as a foreign body to mechanism of defecation thereby causing a frequent desire for stool which in some instances causes rectal prolapse, mucous and serosanguinous discharges. Any child who has a persistent diarrhoea, rectal bleeding and partial rectal prolapse should be thoroughly studied for polyps. Most all polyps begin as a benign growth, and should be surgically removed and the base thoroughly coagulated; if allowed to remain they will become inflamed and ulcerated and statistics show that a great percentage of these polypoid masses will become malignant.

False polyposis must not be confused with the true polyp and therefore cannot be treated the same. This condition is the result of a long standing mucosal inflammation and ulceration and the resulting scarring and contraction which takes place throws the mucous lining up into polypoid-like masses. Here the treatment consists, if possible, in determining the etiological cause of the ulceration and correcting it.

Rectal stricture, providing it has not followed some surgical procedure and is not due to a benign or malignant growth, is almost universally, according to our textbooks, caused by gonorrhea, syphilis or tuberculosis. We now know that gonorrhea, syphilis and tuberculosis cause less than three per cent of our strictures. The causative factor is a disease called lymphopathia venerea. This disease has been prevalent in the tropics and in our country for years, but not until the past five or six years have we realized that this is distinctly a venereal disease, transmitted by sexual intercourse, diagnosed by the Frei antigen test, and characterized in the male by an initial penial lesion which is not painful. It is followed by an inguinal adenitis about two weeks later and rectal stricture, if the virus has travelled the urethral lymphatics to the prostate and then to the perirectal tissue.

In the female the initial lesion is in the vagina with no early symptoms, but later it is characterized by rectal stricture, multiple abscess and fistula formation, diarrhoea and mucopurulent discharge. The anal skin and labia majora are often endurated, hard and brawny due to the blocking of the lymphatics. At present there is no specific medicine that will cure this disease. We know that it travels the lymphatic route and if not stopped surgically it will extend from the rectal lymphatics up the wall of the colon and cause numerous strictures and occasionally complete obstruction. Therefore, we treat this as if it were a cancer, doing a colostomy wherever we find normal colon tissue, thereby diverting the fecal stream from the diseased, ulcerated, strictured gut. Rectal irrigations, hot sitz baths and therapeutic x-ray treatments are then instituted to clear up the secondary infections and adhesions. When and if this is accomplished the sigmoid and rectum are removed.

The end results are truly amazing, as we have seen patients of fifteen years' duration gradually get so anemic and weak that they had to be brought to the John Gaston Hospital on a stretcher and numerous transfusions given before a simple colostomy could be done; then, six months after the second stage resection was done these apparently hopeless individuals were making their living, which for the past five or six years had been impossible.

Malignant growths of the rectum and lower sigmoid rarely produce any definite pain, but if situated low they cause spasm of the sphincter. Tumors higher up in the recto-sigmoid tract may produce reflex pain from pressure upon nerve trunks. The first objective symptoms might be unusual severe constipation, followed later by diarrhoea, excessive gas formation and later by some blood and a rather offensive discharge.

There is very little loss of weight or strength and practically no anemia in patients who have a malignancy of the sigmoid and rectum in the early stage of this disease. Therefore, we doctors, realizing that there are no absolute diagnostic symptoms of rectal cancer, when consulted by a patient who complains of any one or all of the following, i.e., stool habits that are altered from their regular routine, excessive gas, persistent diarrhoea, rectal discomfiture, should tentatively diagnose his complaint a malignancy until a thorough check-up sustains or disproves our original opinion.

May I suggest that the examination always consist of a digital, rectal speculum and a sigmoidoscopic procedure, and if there should be doubt about a lesion higher up it would be wise to have a barium and contrast air enema x-ray.

We are of the opinion that early rectal and sigmoid malignancies offer more hope for a permanent cure by radical surgery, than any other intestinal lesion, provided there are no liver and general mesenteric metastases.

We prefer to do a single barrel colostomy through a small left McBurney incision and remove then or later the sigmoid and rectum by as radical an operation as possible, thereby getting all of the gland bearing tissue which might be harboring some of the cancer cells.

In conclusion, I have tried to describe the characteristic symptoms for each particular lesion, at the same time realizing this picture may be complicated by a multiplicity of coëxisting diseases and therefore any and all kinds of complaints. We therefore owe it to our patients and to ourselves to examine thoroughly all cases with any of the suggestive symptoms, that a correct diagnosis may be made and our obligations to society fulfilled.

The Importance of the Family of the Malaria Patient to the Public Health Official*

B. H. BOOTH, M.D.
DREW, MISS.

SINCE THE introduction of atabrine (methoxychlor-diethylamino pentylamino - acridine) in 1932, so many scientific and clinical studies have been made on its use in the treatment and prophylaxis of malaria that even casual reference to the literature seems beyond the scope of this paper. There is one point, however, which has not received sufficient emphasis—the importance of the immediate members of the family of a malaria patient from a public health standpoint.

In the early part of July, 1937, a blood parasite survey was carried out by the Sunflower County Health Department on the workers of the Brooks plantation near Drew, Mississippi. Six hundred persons of all ages were examined, 50 of whom showed malarial parasites in their blood at the time of the survey —a blood parasite index of 8.3 per cent. All patients harboring parasites were given one therapeutic course of atabrine. This consisted of three 0.1 gm. tablets of atabrine, in divided doses, per day for five days. Following this course of treatment, three tablets were given one day of each week for the following eight weeks. Children under ten years of age rereived half of this dosage.

During the subsequent malaria season, none of these 50 persons who in July were known to be harboring malarial parsites showed any clinical symptoms of malaria. Among the 550 persons having negative smears in July and who received no atabrine, 115 clinical cases of malaria developed during the season. The blood of all of these patients was examined for parasites and all had Plasmodium *vivax* infections. Thus, during the 1937 season, the incidence of malaria among persons with negative smears in July was 17.2 per cent. By adding these 115 clinical cases to the 50 found positive in the survey, there results a total of 165 persons (or 27.5 per cent of the 600 persons originally examined) who had positive blood smears during the season.

An analysis of the occurrence of malaria during 1937 disclosed that there were 17 new cases of malaria in 10 families of those positive in July, 1937. Among the 115 clinical cases of malaria occurring in 1937:

Fifteen families had 2 cases each, a total of 30 cases; 11 families had 3 cases each, a total of 33 cases; 3 families had 4 cases each, a total of 12 cases; 1 family had 6 cases a total of 6 cases.

Thus of the 115 cases of clinical malaria, 81 were associated with other clinical cases in the same family, and 17 occurred in the families of persons who had had parasites in the blood at the time of the July survey. In other words, a total of 98 of 115 clinical cases of malaria were associated with the presence of malarial infection in other members of the family. With these facts in mind, it seemed that closer attention should be paid to the families of malaria patients.

Therefore, in May, 1938, another survey of this plantation was carried out by the County Health Department. Blood smears of 450 persons were examined, and 27 of these were found positive for malaria—an increase of 6 per cent. Of these 27 positives, one left the locality before treatment was instituted. Of the other 26 persons harboring parasites in May, 1938, 18 received the same treatment as was given the year before, but in addition, all members of their families received the prophylactic treatment of three 0.1 gm. tablets on one day of each week for the following eight weeks. During the malarial season of 1938, none of these 18 persons, whose blood smears showed the presence of malarial parasites and who had received a course of atabrine, developed clinical malaria, nor did any members of their families acquire the disease. The 8 persons harboring parasites who did not present themselves for treatment were used as controls. Neither they nor members of their families received any anti-malarial treatment, unless they developed clinical symptoms of malaria. Four of these 8 positives developed malaria, confirmed by blood examination, during the course of the ensuing season. The family of one of these positives presented two other cases of malaria during the year. In 1938, among the 423 persons who had negative smears at the time of the May survey, 28 (6.6 per cent) subsequently developed malaria during the year. Combining the number of persons harboring parasites during the May survey with those developing malaria during the year, a total of 55 positives (12.2 per cent) was received. Of the 27 positives occurring in the survey of May, 1938, 7 had also been positive in 1937; of the 32 clinical cases in 1938, 9 had positive blood smears the year before. Thus, out of a total of 165 positives in 1937, 16 were again positive in 1938. These had either acquired malaria anew in 1938 or had not been cured by the treatment which they received in 1937.

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*Read before the thirty-eighth semi-annual meeting of the Delta Medical Society, Greenville, Miss., Oct. 8, 1941.

DISCUSSION

Following the treatment with atabrine of all persons presenting positive blood smears during the course of a malaria survey early in 1937, the blood parasite index was reduced from 27.5 per cent in 1937 to 12.2 per cent in 1938. While it is impossible to rule out the effects of other factors, notably meteorologic conditions, it is our opinion that the treatment used was largely responsible for the production of this gratifying result.

Cases of malaria tend to occur in families in which this disease has already made its appearance. The occurrence of "secondary" cases of malaria in a family may be prevented by adequate treatment of the "primary" cases and by the administration of a prophylactic course of atabrine for eight weeks to the other members of the family.

CONCLUSIONS

1. Careful attention by public health officials and physicians interested in the control of malaria should be given, not only to the malaria patient himself, but also to his family.

2. Adequate treatment with atabrine, of all cases of malaria occurring in a community has a tendency to reduce the frequency of this disease.

ADDENDA

Keeping up the same procedure on this plantation as described in the body of this paper the malaria index on this plantation has been reduced until this year it is less than 1%.

Gunshot Wounds of the Abdomen Involving the Gastro-Intestional Tract*

JAMES C. GREEN, M.D.†
TUPELO, MISS.

WE FIND THAT many of these cases are in severe shock, so we should be guarded in applying surgical therapy too soon. Morphine and atropine should first be given. Frequent blood pressure readings are all important, and the abdomen should not be opened until the systolic blood pressure is above 90. The intravenous administration of large quantities of saline should be avoided until hemorrhage is controlled. Blood transfusion should be given at once, or acacia started until the blood is available. For all pracitcal purposes all of these abdomens are going to be explored and the resolution made by Dr. Howard Kelly at the Southern Surgical Association in 1896, "that in gunshot wounds of the abdomen the proper routine procedure is to laparotomize" still holds. There will occasionally be a case with a wound of the upper right quadrant where one feels that only the liver or possibly the kidney is involved and the gastro-intestinal tract has escaped.

Of course, the first thing then with which we have to deal is shock, whether it be shock secondary to hemorrhage as in most of these cases, or primary autonomic shock. Drs. Scudder and Freedman have made a most significant contribution in differentiating these two, by the use of the Hamilton-Barbour method of determining the specific gravity of blood by the falling drop method. When the specific gravity of peripheral blood increases shock is produced by the loss of water; when the specific gravity decreases shock is present because of hemorrhage. This is a most significant observation indicating that the patient is going into shock long before the clinical manifestations of drop in blood pressure, rapid pulse and sweating occur. It is exactly twenty-five times more accurate than the hemoglobin and red cell count and is most helpful in diagnosing a concealed hemorrhage of any type.

The mortality rate is in direct proportion to the amount of hemorrhage and shock. Infection, shock, hemorrhage, and infection are what kill the patient. The gross mortality in the penetrating gunshot wounds of the abdomen is fifty per cent. The two sites which cause the greatest number of deaths are penetrations of the colon and a large blood vessel.

Complications that are numerous but most significant are peritonitis with residual intra-abdominal, cul-de-sac or subphrenic abscesses. Two cases in my series died of this complication, one being associated with an intestinal obstruction. Experimental work is at present under way at Tulane to demonstrate the feasibility of reducing the severity of peritonitis in military casualty cases. The intestinal flora of troops on active duty likely to receive abdominal injuries are transformed by administering cultures of lactobacilli, in addition to the precautionary prophylactic vaccination against tetanus. Gas gangrene infections may be prevented by the soldier carrying sulfanilamide powders in his uniform, as advocated by Guy Caldwell at Tulane, for compound wounds of the extremities. Wound infections and deficiencies may be prevented by the use of sulfanilamide, vitamin C, zinc peroxide and the use of non-absorbable suture material, particularly cotton.

Pulmonary complications are frequent from abdominal wounds. Atelectasis and pneumonia may be greatly lowered by avoiding general inhalation anesthesia and the use of sulfathiazole if pneumonia does occur. It should be kept in mind to preserve the intestinal tract continuity so that if the patient takes pneumonia, as happens in a large percentage of upper abdominal penetrations, he will be able to take sulfathiazole by mouth. This is of especial significance in penetrations of the colon where peritonitis is likely to be most fulminating. An exteriorization with amputation of the perforated loop and a proximal colostomy relieves the obstruction. One patient in our series who developed pneumonia was able to take sulfathiazole and recovered. Another case died with what was thought to be pneumonia, but at autopsy a large subphrenic abscess with parenchymatous degeneration of practically all the organs and no pneumonia, was reported by the pathologist. An elevation of the diaphragm did not occur. It is needless to say, however, had this abscess been drained in its early onset the patient would probably have been saved.

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†Visiting surgeon to North Mississippi Community Hospital.

Associated injuries of the extremities, kidney, liver, gallbladder, bile ducts, ureter, bladder, head, spinal cord and diaphragm should not be overlooked. The only way to prevent overlooked perforations of the gastro-intestinal tract is to examine both anterior and posterior walls of the stomach, the duodenum, and lift up the transverse colon to run the bowel carefully from the ligament of Trietz to the anus.

It is better to close the posterior wall of the stomach by increasing the size of the opening in the anterior wall and close the posterior wall through it. Nor should one resect loops of bowel unless it is too mutilated to suture. Resection adds to shock. In one of our series, however, closure caused a complete obstruction, and at secondary operation, which revealed three abdominal abscesses, resecting a loop of small bowel proved inefficacious.

Long operations should be avoided and although the exploration should be thorough no time should be wasted.

With our modern methods of treatment of shock with serum, plasma, suprarenal cortex hormone; Tocantin's needle for secondary shock; hemorrhage with blood banks; infection with sulfanilamide groups and gramicidin, shock may be controlled. The routine use of Miller-Abbott tube postoperatively to keep down ileus, mortality should be lowered to an appreciable degree.

The most recent article on this subject appeared in February 15 issue of *Surgery, Gynecology and Obstetrics,* by Ambrose Storck of the surgical department of Tulane University. The U. S. Medical Department makes the statement that these are the most serious problems with which the military surgeon has to deal. No other group of cases furnishes anything comparable to them in testing the military and technical skill of the surgeon. The methods of transportation by airplane and mobile units make operative treatment available within six, and not more than twelve, hours posttrauma.

We have already discussed shock but the prospects are favorable for use in emergencies of bovine serum albumen. The patient must not be allowed to go into secondary shock if at all possible, for it takes 540 cc. of blood to raise the blood pressure 10-20 points of mercury. Those cases that come in in profound second shock are going to require two to three thousand cc. of blood to pull them out of it. Schendorf and Orr have shown the value of pure oxygen in controlling shock by use of the Boothy mask. The report of Hurwitz and Mark concerning the serum content of fluid present in the lumen of distended loops of bowel and resulting depletion of plasma proteins in the circulating blood emphasizes the importance of plasma transfusions as a rational part of the treatment of ileus. We are all familiar with the suprarenal cortex hormone in treatment of shock.

Penicillin, the bacteriostatic fungus extract, which has been the subject of a report by Florey, and gramicidin, an antibacterial substance obtained from sporulating bacilli, give promise when the sulfanilamide groups fail. Dubos' and Hotchkiss' work on the use of these in empyema has greatly reduced the need for rib resecting.

Pulmonary complications may be reduced by deep breathing, bronchoscopic aspirations and serum and sulfanilamide groups. The high mortality of gunshot wounds of the abdomen associated with the "sucking" or "blowing" chest wounds can be lessened by closing the thoracic wound by suture or tight dressing, thus preventing paradoxical respirations.

CASE REPORTS

(1) Case No. 4362: E. P. Admitted July 4, 1940, one hour posttrauma. Operated on two and one half hours post admission, and three and one half hours posttrauma. Bullet (38 steeljacket) penetrated the chest at the level of the tenth rib on the left. At laparotomy the bullet was found to penetrate the thorax, pericardium, diaphragm, anterior and posterior walls of the stomach and jejunum in two places. Considerable free blood in peritoneal cavity. Patient given acacia and glucose during operation and 300 cc. of blood postoperatively. Wangansteen suction, A.T.E., sulfathiazole and x-ray for elevation of the right diaphragm. He ran a rather continuous fever around 100°-101°F for three weeks, then suddenly shot up to 104°

on twentieth postoperative day. His physical findings were rather typical of pneumonia. He was seen by the medical man on service who felt he had a pneumonia. He rapidly failed and expired on his twenty-fifth postoperative day. Autopsy revealed a large subphrenic abscess with parenchymal degeneration of the liver, spleen and fragmentation of heart muscle. Abdomen should have been reopened and abscess drained. No pneumonia was found at autopsy.

(2) Case No. 5619: E. H. Colored male 20 years of age. Admitted one hour posttrauma. Operated on two hours posttrauma. In severe shock. Two bullet holes in abdomen, one two inches to left of umbilicus and one in the flank. Laparotomy revealed perforation of proximal jejunum and distal ileun and head of cecum which were repaired. Patient ran a continuous temperature for eight days around 100°F. Wangansteen suction removed, began to have more distention and abdominal colic, x-rayed (flat plate typical of intestinal obstruction). Transfused and abdomen reopened. Three abdominal abscesses drained and jejunum resected at the sife of suture where it was completely obstructed. Resection of loop should have been done at time of first operation but the lumen felt ample after it was sutured. Both cases died from infection, the last having in addition intestonal obstruction. They received sulfathiazole. Gramicidin. had it been available, might have been of more value. Both received ample blood transfusions and fluids.

The last two cases might be discussed together as they are somewhat similar.

(3) Case No. 6684: Colored female admitted September 20. 1941, with three bullet holes in left abdomen. one in upper abdomen and two in left lower abdomen. Laparotomized five hours posttrauma. Perforations of anterior and posterior walls of stomach and jejunum sutured and the sigmoid colon exteriorized and loop amputated on Rankin clamp, and a proximal colostomy done. This relieved the obstruction until clamp sloughed off. Patient developed pneumonia on the third postoperative day and recovered with sulfathiazole.

Second and third stages on colostomy done and patient recovered. Discharged on the thirteenth postoperative day. This case was not drained. The other two were. This illustrates the value of restoring the intestinal continuity to combat pneumonia if it does occur. No Wangansteen suction necessary in this case. Obstruction relieved by colostomy and patient could take sulfathiazole by mouth.

(4) Case No. 6819: Colored female, 18 years of age admitted November 19, 1941, in little shock and no blood in peritoneal cavity. Laparotomized one and one-half hour posttrauma and a perforation in ascending colon sutured. Sulfaguanidine powder placed in peritoneal cavity. No drains were used. Patient discharged in nine days. No infection present. Case illustrates the dictum the amount of hemorrhage and shock govern the mortality. Sulfanilaguanidine may have played a part there.

SUMMARY

1. Gunshot wounds of the abdomen involving the gastro-intestinal tract comprise one of the most serious of our surgical emergencies.
2. The high mortality has been lowered but little. Our modern methods of the treatment of shock, hemorrhage and infections offer some new encouragement.
3. Complications are frequent and one must be on the alert as to what may develop and how they should be handled before they have progressed too far.
4. Associated injuries to other organs and parts of the body should not be overlooked.
5. Four cases were reported with a frank discussion as to the causes of death.

BIBLIOGRAPHY

1. Shipley, A. M., and Hamrick, J. C.: Abdominal Catastrophies Resulting from External Violence. American Journal of Surgery. 42. 542. 1938.
2. Storck, Ambrose: Penetrating Wounds of the Abdomen. Annal of Surgery. Vol. 111. No. 5. May, 1940.
3. Beasley, Frederic, Mulholland, John H., Bailey, Fred W., and Storck, Ambrose: Abdominal Traumas. Surgery, Gynecology and Obstetrics. October. 1941.
4. Meyer, Karl and Shapiro, Philip: Treatment of Abdominal Injuries. Surgery, Gynecology and Obstetrics. March, 1938.
5. Shipley, Arthur, Moore, Clarence, Rippy, Elkin Albert: Penetrating Wounds of Abdomen Caused by Trauma. Surgery, Gynecology and Obstetrics. February 15. 1942.
6. Storck, Ambrose: Gunshot Wounds of the Abdomen. Surgery, Gynecology and Obstetrics. February 15. 1942.

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HOW TO OBTAIN A HOSPITAL PROGRAM FOR THE INDIGENTS OF MISSISSIPPI

It should be the duty of the Mississippi State Medical Association to make it clear to all its members, as well as to other organizations and associations, that the medical profession is *primarily* interested in the practice of medicine and through organization to prepare ourselves better for the care of the sick and to render all aid possible to those who require our services, whether indigent or not, when called on to do so. But it should be clearly understood that the medical profession should not and must not be obligated by any such agreement as was attempted at the recent session of the Mississippi legislature by the State Hospital Association whereby it was agreed to place on the doctors of Mississippi *all* the medical and surgical care of indigents in hospitals of the state without remuneration.

Last year 15,000 cases were cared for by the *paid* house staffs of the five state-owned and maintained charity hospitals, while 12,000 indigent cases were cared for by the local hospitals participating in the per capita fund. None of these physicians and surgeons of the local hospitals were supposed to have received any cash remuneration for their services. Is it right to expect the medical profession to be obligated to care for the load of 27,000 indigent hospital cases in one year with *no cash remuneration? NO!!* With the withdrawal of the younger men to the armed forces for the duration of the war, we can expect a further depletion of the ranks of the medical profession in the near future. The physicians of Mississippi cannot carry the load which was attempted to be placed on their shoulders without even being allowed a voice in the agreement. Organized medicine in Mississippi should state its feelings, should have the right to be heard where the medical profession is concerned. As a member of the Council, I can truthfully say that the organization was not consulted in the matter. The author is of the opinion that the Mississippi State Medical Association must be consulted in *all cases* involving its members wherein they must be obligated for services, deeds, or actions.

The Mississippi State Hospital Association and the Mississippi State Medical Association, as evidenced by a unanimously passed motion in both associations in Biloxi in 1941, are interested in providing adequate hospital care for the indigent sick of Mississippi by continuing the present plan of hospitalization as provided by the state of Mississippi. In addition thereto, to make the program more complete, those recommendations should be followed and there should be placed in Mississippi a hospital of sufficient size to accommodate special cases requiring orthopedic, urological, contagious disease, and other specialized care. This would supply the indigent people with the care to which they are entitled. Of course, this central hospital would require a full time staff *paid* by the state with a consulting staff uncompensated. This, naturally, will improve hospitalization for the indigent—but there is nothing in this program, approved by the medical and hospital associations, which would necessarily increase the *amount of MONEY* that the hospitals receive under the per capita plan. It is beneficial to the indigent and the medical profession, but it is not *directly* beneficial to the hospitals from a cash standpoint. I wonder if this might have been the reason that this program did not meet success in the legislature at this session? It seems to be entirely possible that it could have been one of the reasons.

The doctors of this state are entitled to consideration, the indigent are likewise entitled to the same consideration, and the competent hospitals are entitled to consideration. Therefore, the sensible solution to the problem can be reached if the old adage is followed, "Come! Let us reason together." I, therefore, recommend that the State Medical Association, the State Hospital Association, and the State Hospital Commission organize a council to make a two-year study of the problem and to submit a partial report at our next annual meeting in 1943, so that approval of the general plan can be made prior to a final report. The paid secretary of the Hospital Commission could act as secretary of the Council for Study of the Problem of Indigent Hospitalization in Mississippi. Meager funds from both associations could be appropriated to meet any necessary expense for other research or statistics and it is believed that a common sense solution to the problem could be reached. The State Medical Association should name three members who are not interested in the administration or finances of a hospital, but a staff member; the State Hospital Association should name three members, two of whom should be physician-owners of good-sized hospitals and one should be a superintendent or owner of a sizable hospital who is not a physician; and the Hospital Commission should select two of their members and the secretary to make the third member from the Hospital Commission. This nine-member committee could render a real service to humanity, the medical profession, and the hospital profession. Let us all strive for the solution to the not too difficult problem by reasoning and studying together so that the correct solution will evolve which will benefit the indigent sick, the hospitals, and the medical profession, with the emphasis on the *INDIGENT SICK*. Selfishness cannot enter into the solution of such a problem, whether it be individuals, organizations, or the Government.

—LAWRENCE W. LONG.

Dr. Harvey F. Garrison, Sr., of Jackson, Miss., president-elect of the Southern Medical Association, is inviting the past-presidents of the Mississippi State Medical Association to be his guests at breakfast at the Robert E. Lee Hotel on May 13 at 7:00 A.M. This is not to take the place of the annual dinner of the past-presidents. He is anxious to have a hundred per cent attendance. This is a very nice thing for Dr. Garrison to do. It will be appreciated. The past-presidents' organization should be and is a splendid asset to the state association. It helps to keep them active and interested. It serves a fine purpose in the promotion of medical fellowship. Medical fellowship, local, state and national, is of the greatest importance. It is urgently needed. Dr. Garrison is always doing nice things for organized medicine. He is very resourceful in doing things that bring pleasure and profit to the profession and add efficiency to its services to the people. Dr. Garrison deserves much credit for his leadership in his own specialty in our state. Mississippi's greatest wealth is in her child power. Pediatrics is helping to increase this wealth. Dr. Garrison is urging you to the fine program offered you in this specialty on May 11. This Mississippian has made his influence felt in Mississippi, in the Southern and in the American Medical Association. In him the Southern has a great president.

Every doctor who possibly can should attend the state meeting in Jackson on May 12, 13, and 14. Organized medicine needs you and you need organized medicine. Every doctor needs the scientific information he will gain. There will be problems coming before the association which you will need to hear discussed, in which you may need to take part. Adequate service to the civil population in Mississippi is more precarious than it has ever been. The lack of funds on the part of the unfortunate sick has been the big handicap in the past, but now we have added to this the shortage of doctors. With health conditions and food as important as they are now, it is virtually impossible for the doctors we still have left at home to do the practice that is urgently needed. With fifty per cent of our doctors past sixty years of age and many of them from sixty-five to eighty-five, we can hardly imagine what might happen if we should have an epidemic of some kind as we had in World War I. It is no time for any doctor to falter. Each and every one must do his best to keep the civil population fit, to build up the health assets. You will no doubt be better fitted to do this by attending the state meeting this year.

Dr. A. Street of Vicksburg has made a fine president of the State Medical Association. He is a student by nature. He possesses mental honesty, letting his mind follow the truth without prejudice, in a logical and orderly manner. Dr. Street also has the habit of investigating a subject thoroughly before making up his mind and then he has the courage to back his convictions. He has performed the duties of the presidency in a most conscientious manner, giving of his time liberally in the interest of the association. Whatever he recommends to the association may well be considered seriously; it is his purpose to leave behind a constructive record.

We congratulate him on securing Dr. W. A. Evans to give the annual oration. The subject, "Jefferson Davis, His Diseases and His Doctors," is timely and the orator most fitting. We are gratified that Dr. Street is to continue the public night that was instituted last year. Following the need of the hour the program will present the role of medicine in victory. This public night will fulfill a great mission for the association. It will help bring about a better understanding between the profession and the laity and aid mightily in building greater health assets for our people. We congratulate Dr. Street on the unusually fine program planned. With conditions as we have them in Mississippi it is important that the attendance be large.

We are sure that the doctors of the state appreciate the sincere interest of Mrs. Street. She made many trips with him and her ever kind, generous, and gracious manner is elevating and inspiring. She too possesses fine qualities of leadership.

The Woman's Auxiliary has rounded out a good year's work under the able leadership of Mrs. W. K. Stowers of Natchez. She has been generous with her time and conscientious in her efforts to do all she can to aid the association. Mrs. Stowers is friendly in her manner, understands the problems of the medical profession and has a sincere interest in their solution. There is an urgent need for a better understanding between the lay public and the medical profession. The medical profession needs to be inspired continuously to greater efforts and the laity needs more medical information to live by. There is need of a marked increase in total health assets. The need for coöperative medicine is more urgent in our state now than it has ever been. It is not even enough to have mental and physical health, but all human powers must be turned in the right direction. Moral courage even yet is more powerful in battle than shot and shell. The medical profession is largely responsible for the finished product of efficient citizenship. The Woman's Auxiliary is the spiritual right arm of the medical profession. We are sure that Mrs. Stowers has done her part in helping to consummate its ideals.

You will note the list of our exhibitors, both commercial and scientific, both of whom play a big part in making a medical meeting a success. Give them as much time as you can. It takes a world of work to prepare a scientific exhibit and each one should be appreciated. After all, we feel that the commercial exhibitors have the same high purpose of service as the medical profession. We believe we should work coöperatively with them. We can help each other. The exhibits are under the direction of the state association this year. As chairman of the committee, we want to thank Drs. Jones and Lippincott for their fine work. Dr. Jones is looking after the commercial exhibits and Dr. Lippincott the scientific.

The Mississippi Pediatric Society meets on Monday, May 11, at the Robert E. Lee Hotel. A fine program has been arranged. At the banquet at seven-thirty Dr. Julius H. Hess will address the meeting on the premature infant. It will be worth your while and more to hear Dr. Hess. Mississippi has made big strides in pediatrics the last few years. It is most fitting that this service be carried out to the small towns and rural communities where it is so badly needed. Mississippi is right in the heart of the democratic arsenal of the world. It is impossible to estimate the value of our leadership in every human endeavor. The factory districts of the North and the East are making finished materials, the Southeast is making men, the most valuable in the world. It is very inconsistent to neglect the babies and small children as we have in the past. Much credit is due Garrison, Womack, Ward, Riley, Arrington and Wilson for their fine work. Read what Dr. Garrison has to say to you.

Mississippi is feeling her shortage in doctors. In the near future she is to feel it more. The war is adding to the problem, but is not at the back of the trouble. Only two of our boys who take the two-year medical course at Ole Miss find their way back to practice in our state. One reason is that they are not taught to practice in the small town and rural community. If we had a central hospital of two hundred beds, allowing use of the state hospital and the Sanatorium for the first year of a two-year internship and our other hospitals over the state for the second year, our young doctors would come out as well trained as formerly and the interns at the same time would render a fine service where it is needed. We should forget about the number of beds in a hospital in terms of an internship. At least three to six months of an internship should be served in the small hospital, say twenty-five beds, and the intern should be required to make calls with the practitioners. They would come out with more sympathetic hearts, they would catch a vision of service perhaps ràther than of operations and dollar marks, and be able to do the work out in the small town and rural community when they are graduated. As far as it goes the small hospital should be as good as the large one. There are some cases of course that should be sent on up the line to specialists, which is a matter of coöperation and affiliation and credit. There should be no lowering of standards in the medical schools. The weaker men should be encouraged to go into the specialties and the abler ones into the general fields.

We are sure you would find it convenient to have your copies of the *Mississippi Doctor* bound each year into one volume. You can get this done at a reasonable cost. The Dixie Bookbinding Company, Jackson, Miss., offers to give you good work at a reasonable price.

Thanks to the Mississippi Power Company for renewal of their advertising space with us.

There are people in the world who are so egotistical and who over-rate their intelligence so much that they seem to think that they could run the universe better than its creator. Of course these people are not satisfied with the manner in which our government is being run. They criticize everything and everybody and object to every plan and every effort that originates with the Administration. At a time like the present when the continued existence of our democratic form of government and the lives of millions of the flower of our young manhood are at stake, this subversive talk is nothing short of mutiny and sabotage and those who indulge in such subversive talk should be confined in concentration camps for the duration. We should remember that we are engaged in an "all-out war" and that this war may be lost, and it *will* be lost unless everyone of us does a soldier's full duty. And a soldier's first duty is to obey the orders of his superiors. One enemy in the camp is far more dangerous than ten who are without. So let us mark well the one who speaks a word against "the powers that be" and let such an one be ostracized by every true patriot. And do not forget that we, all, are either patriots or traitors. And if patriots, then, "ours not to reason why; ours but (if need be) to do and die." I wish that my vocabulary contained words to express my contempt for the cowards and money-grabbers who would lose our form of government in spite of the loss of life that is bound to attend our efforts to retain the freedom that is our heritage from those who have gone before us.

* * *

The plan is to raise an army of three million six hundred thousand by the end of 1942. Fifty thousand doctors are needed to care for these soldiers, most of them yet boys. These boys are drafted but they are willing to go and, if need be, to die. But doctors seem to be unwilling to go with them. In my county only one doctor has gone and he is beyond the age limit. Much effort and scheming had to be resorted to in order that he might be accepted. This man left the best paying practice in the county and did not count it a sacrificial act. Several younger men surrendered commissions in the Medical Reserve Corps. I wonder if covetous eyes were cast upon the splendid work that was being renounced by the one who went? Dr. M. Q. Ewing is the one who went—all honor be to him. I am in receipt of letters from doctors in other counties, informing me that similar conditions prevail elsewhere.

* * *

Shortly after these lines are published, our state association will meet in Jackson. I hope to meet many of our doctors there. I well remember the meeting of this association just as the last war began. Little of the scientific program, as it had been planned, was carried out. But most of the younger members, then and there, volunteered to give their services and some of them did not return. Some who did return were disabled and have since passed on. We respect and love their memory. I wonder if the gleam from their shields as they parade in the hall of fame will be caught by the eyes of our young men? As I write I hear the rumble of a "soldier train." It carries hundreds of boys, many of them of high school age. I wish that I might be privileged to go with them.

—G. S. B.

THE FOLLOWING essayists will address the seventy-fifth annual session of the Mississippi State Medical Association. Make your plans to hear as many of these men as possible, not forgetting the luncheon hours.

Section on Eye, Ear, Nose and Throat

DR. ALSTON CALLAHAN, Chairman

ATLANTA, GA.

Dr. Callahan received his B.A. degree from Mississippi College in 1929; M.D. degree from Tulane Medical School in 1933; M.S. of Ophthalmology from Tulane Graduate School in 1936. He was instructor in the Eye Department, Tulane University, 1935-36, was certified by American Board of Ophthalmology in 1937, and is a member of the American Academy of Ophthalmology.

Dr. Callahan was associated with Dr. Edley H. Jones in Vicksburg, Miss., from 1937 through 1941, moved to Jackson in January, 1942, restricting his work to ophthalmology. In February, 1942, he resigned his practice in Jackson to accept the chair of ophthalmology of Oglethorpe Medical School in Atlanta, Ga., and to be associated with Dr. Murdock Equen, noted laryngologist of Atlanta. Dr. Callahan has served as editor of the eye reviews for the *Mississippi Doctor* for the past four years.

DR. WILEY BUFFINGTON

NEW ORLEANS, LA.

Dr. Buffington received his M.D. from Tulane in 1899. He is visiting surgeon at the Baptist Hospital, sr. visiting surgeon at Charity Hospital, surgeon-in-charge, Eye Department of Eye, Ear, Nose and Throat Hospital. He is professor of ophthalmology at Tulane University. He is also consultant ophthalmologist at U. S. Marine Hospital. His memberships include the American Academy of Ophthalmology and Otolaryngology, A. M. A., and Southern Medical Association.

Subject: "Retinal Detachment: Its Surgical Correction, Preoperative and Postoperative Care With Slides)."

DR. VAN DYKE HAGAMAN

JACKSON, MISS.

Dr. Hagaman received his M.D. from Vanderbilt University in 1928. He was certified by the Board of Ophthalmology in 1932. He is visiting otolaryngologist for the Mississippi Baptist Hospital and Mississippi State Charity Hospital. He is a member of the American Academy of Ophthalmology and Otolaryngology, and the A.M.A.

Subject: "Osteoma of the Frontal Sinus."

DR. DANIEL ELI STATON

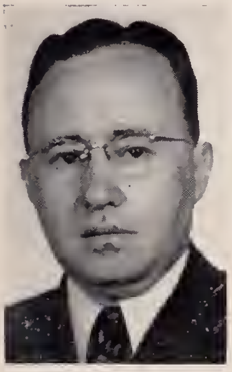
COLUMBUS, MISS.

Dr. Staton was born June 3, 1886, graduated in medicine at Tulane University Medical School, New Orleans, La., in 1909. He served an internship at New Orleans Eye, Ear, Nose and Throat Hospital. He has done postgraduate work in New York and Chicago at various times. He is ophthalmologist and otolaryngologist for Columbus Hospital, Columbus, Miss., a fellow of the American College of Surgeons.

Subject: "Certain Eye Observations."

DR. H. K. ROUSE, JR.

GULFPORT, MISS.



Dr. Rouse was born at Poplarville, Miss., June 24, 1903. He received his high school education at the Pearl River County Agricultural High School located at, Poplarville; obtained his Ph.C. degree from Tulane University in 1923. After practicing pharmacy two years he reëntered the Tulane Medical School and received his M.D. degree in June 1931. This was followed by an internship at Charity Hospital in New Orleans. After doing three years of general practice he did postgraduate work as a resident in otolaryngology and ophthalmology. Since 1937 he has been associated with Dr. C. A. McWilliams in the McWilliams Clinic with practice limited to the fields of otolaryngology and ophthalmology. In 1939 he was certified by the American Board of Opthalmology. He is a member of the American Academy of Otolaryngology and Ophthalmology, also a member of his local, state and national societies.

Subject: "Headaches Relieved by Histamine."

DR. SAMUEL BROOKS CARUTHERS

GRENADA, MISS.

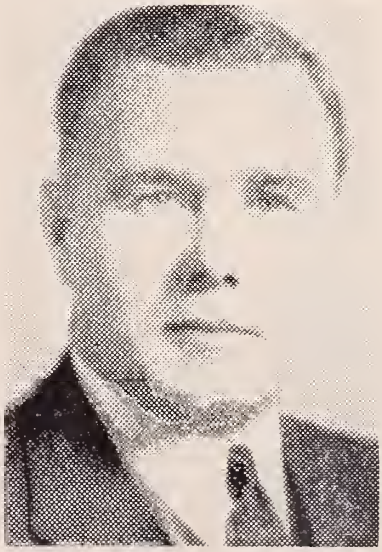
Dr. Caruthers received his B.S. degree from the University of Mississippi in 1928, and his M.D. from Vanderbilt University in 1930. After interning at the University of Virginia Hospital he was house surgeon at the New York Postgraduate Hospital on E. E. N. and T. until 1934 when he became a partner at the Grenada Clinic. Dr. Caruthers was certified by the American Board of Otolaryngology in 1936 and by the American Board of Ophthalmology in 1937, being the only man in Mississippi having certificates from both boards. He is a member of the American Academy of Ophthalmology and Otolaryngology, of the Louisiana-Mississippi Ophthalmological and Otolaryngological Society and of the Memphis Eye, Ear, Nose and Throat Society.

Subject: "Improvement of Hearing by Irradiation."

Section on Hygiene and Public Health

DR. J. A. MILNE, Chairman

JACKSON, MISS.



Dr. Milne was born in Woodburn, Nova

Scotia, in 1900. He received his M.D., and C.M. degrees at Dalhousie University, Halifax, in 1924. He took postgraduate work at Manchester Royal Infirmary, Manchester, England, and Rotunda Hospital, Dublin, Ireland, from 1924-26. He did private practice in Yarmouth, Nova Scotia, in 1926 and 1927. He came to Mississippi to attend a public health training school at Indianola in 1928, then served as director of Copiah County health department from Jan., 1929, to Oct., 1930. Received his degree of Master of Public Health, Harvard School of Public Health, in 1931. Served as supervisor of the field unit, Mississippi State Board of Health from July, 1931, to December, 1937, then as director of the division of maternal and child health from Jan., 1938, to April, 1938. Has been serving as director, division of county health work, Mississippi State Board of Health, from 1938 to present date.

DR. PAUL T. HANEY
LAUREL, MISS.

Dr. Haney was born in Iuka, Miss., April 3, 1899, the only son of the late Dr. T. P. Haney and Mrs. Haney. After obtaining his B.S. degree from University of Virginia in 1926, he served as county health officer of Tishomingo County two years, Holmes County two years. Then he received the degree of Master of Public Health from Johns Hopkins University in 1931. He was director of Pike County health department until 1939, when he resigned to complete work for the degree of Doctor of Public Health from Johns Hopkins in 1940. Since that time he has been director of Jones County health department at Laurel.

Subject: "Maternal Care in Jones County."

DR. THEODORE A. bert WATTERS
NEW ORLEANS, LA.

Dr. Watters is senior visiting physician, Charity Hospital. He received his M.D. from Tulane University in 1929, and was certified by the American Board of Psychiatry and Neurology in 1934. He is consulting neurologist for the Illinois Central Hospital, visiting physician in the department of neurology at Touro Infirmary, assistant professor of psychiatry and director of O. P. Psychiatry Dept., Hutchison Memorial Clinic, Tulane University. Dr. Watters is a member of the A. M. A., American Psychiatry Association, Central Neuropsychiatric Ass'n., Southern Medical Association (chairman Section Neurology and Psychiatry), Southern Psychiatric Association.

Subject: "The Consideration of Mental Health as a Part of a State Health Program."

DR. D. W. GUDAKUNST
NEW YORK, N. Y.

Dr. Gudakunst was first industrial physician Solway Process Co., Detroit, Mich., after receiving his M.D. degree from the University of Michigan in 1919. He was county health officer, Roswell, N. M., 1921-23; director of school health service, Detroit Dept. of Health, 1924-37. He received his D.P.H. from Wayne University and has held the position of professor of public health and preventive medicine in that university since 1937. He was state health commander, Mich. State Dept. of Health, 1938-1939; sr. surgeon (R.) U.S.P.H.S., 1939; medical director, Nat. Foundation for Infantile Paralysis since Jan. 1, 1940. He is a fellow in the American Public Health Assn., a member of A. M. A., Mich. State Med. Soc., Wayne County Med. Soc., Alpha Kappa Kappa. Methodist.

Subject: "Recent Research in Poliomyelitis."

DR. A. L. GRAY and
MAJOR LAWRENCE W. LONG
JACKSON, MISS.

Dr. Gray was born in Fulton, Miss., in 1899. After receiving his B.S. degree at Mississippi State College in 1924, he taught vocational agriculture two years at Fulton, Miss., 1924-26. Received his M.D. degree from the University of Tennessee in 1930, and began work as director of the Copiah County health department. In 1932-33 he attended Harvard School of Public Health studying for the Master of Public Health degree.

Served as supervisor of the epidemiological unit of the State Board of Health from 1933 to 1938. Since 1938 he has served as director of preventable disease control, State Board of Health.

Subject: "The Disclosure of the Venereal Disease Problem by Selective Service Examination Including Plans Evolved for its Correction."

DR. W. A. EVANS

ABERDEEN, MISS.

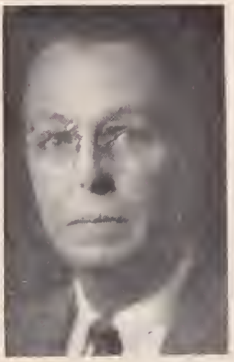
Dr. W. A. Evans is a native of Aberdeen and a citizen of the world. His name was as well known to the lay public as to the profession, when he wrote the syndicated "How to Keep Well" column in *The Commercial Appeal*, and the same is true of the territory covered by the *Chicago Tribune*. He is also widely known as a pathologist and everywhere as a pioneer in public health. Dr. Evans is a versatile man, especially able as a historian. His work in restoring the home of Jefferson Davis and making it a shrine to perpetuate Southern history is deeply appreciated by the people of Mississippi and other Southern states. His introduction of Doctor Rudolph Matas of New Orleans, the orator at our last annual meeting at Gulfport, as a barbeshela of the doctors of Mississippi was really the hit of the convention. His subject this year is very appropriate and timely.

Subject: "Jefferson Davis: His Diseases and His Doctors."

Section on Medicine

DR. JOHN G. ARCHER, Chairman

GREENVILLE, MISS.



Dr. Archer is associated with the Gamble Brothers and Montgomery. This clinic is a great credit to our state. Dr. Archer is well-known and his ability is recognized not only in Mississippi but in the Mid-South. Dr. Archer is governor for Mississippi of the American College of Physicians, and at the last meeting of the Mid-South Postgraduate Medical Assembly was elected vice-president from Mississippi.

DR. A. GAYDEN WARD

JACKSON, MISS.

Dr. Ward was born in Brandon, Miss., on November 21, 1906. He attended public schools in Jackson and received his B.A. degree from Millsaps College in 1927, and his M.D. degree from Tulane in 1931. Served two years rotating internship in the Graduate Hospital, University of Pennsylvania, 1931-33; one year as chief resident physician in the Graduate Hospital, University of Pennsylvania. In 1934 he opened his office in Jackson, limiting his practice to internal medicine.

Since 1937 he has been associated with the Medical Clinic. He is on the medical staff of both the Mississippi Baptist Hospital and the Jackson Infirmary. He serves as cardiologist for the U. S. Veterans Administration, the Mississippi Vocation Rehabilitation Board and the Railroad Retirement Board. Dr. Ward is a diplomate of the National Board of Medical Examiners, an associate member of the American College of Physicians. He graduated from Tulane with Alpha Omega Alpha distinction.

Subject: "Virus Pneumonitis."

DR. A. H. LITTLE
OXFORD, MISS.

Dr. A. H. Little is a native Mississippian and son of Dr. W. L. Little of Wesson, Miss., who is a past-president of the Mississippi State Medical Association. Dr. Little received his B.S. degree from the University of Mississippi; M.D., from Tulane University, and did graduate work in medicine, allergy and urology. He is associated with the University of Mississippi Medical School as assistant professor of medicine and physical diagnosis. Dr. Little is a member of the staff of Oxford Hospital as internist, and has been secretary of the North Mississippi Medical Society since 1930.

Subject: "Histamine Cephalalgia."

DR. RALPH BOWEN
HOUSTON, TEXAS

Dr. Bowen's postgraduate work consisted of a year in internal medicine, three years in pediatrics and one year in otolaryngology. The past ten years have been devoted exclusively to the allergic child, and also to adults. He received his degree in biochemistry at the State University of Iowa in 1921, and the degree of medicine was conferred on him from the same university in 1924.

Postgraduate work was done at Montreal, Canada; the Children's Hospital at the State University of Iowa; Washington University, St. Louis; City Hospital, Boston, Massachusetts, and special work in allergy in London, England.

He is a fellow of the American College of Physicians, the American Academy of Pediatrics, and the American Board of Pediatrics, and also the Southwest Forum for Allergists. Dr. Bowen has also taught in the universities of Iowa, Tennessee and Oklahoma.

Subject: "The Practical Management of the Asthmatic Child."

DR. B. B. O'MARA
BILOXI, MISS.

Dr. O'Mara is a native of Pike County, Miss. He took two years of medicine at Ole Miss, and received his M.D. degree from Emory University in 1924. Interned at Davis-Fischer Sanatorium, Atlanta, Ga. Was on staff of Mississippi State Sanatorium from 1925 to 1930; with the U. S. Veterans Administration as T.B. specialist from 1930 to 1933, and on the staff of the U. S. Government Hospital at Biloxi from 1933 to 1935. Dr. O'Mara has been engaged in private practice in Biloxi since August, 1935. He was president of the Coast Counties Society in 1940 and is now vice-president from the Southern District of the Mississippi State Medical Association.

Subject: "The Value of Pneumothorax in the Early Treatment of Tuberculosis."

DR. EUGENE T. ELLISON
GREENVILLE, MISS.

Dr. Ellison was born in Chattanooga, Tenn., graduated from Vanderbilt University and Vanderbilt University School of Medicine. Dr. Ellison was instructor in Obstetrics and Gynecology at Vanderbilt University Hospital in 1933-34. He is now in charge of the Department of Obstetrics at Gamble Brothers and Archer Clinic, Greenville, Miss. He is a member of the Delta Medical

Society, Mississippi State Medical, American Medical, Southern Board of Gynecology and Obstetrics and fellow of the American College of Surgeons.

Subject: "Endocrine Therapy with Stilbestrol, a Physiological Approach."

DR. L. J. CLARK
VICKSBURG, MISS.

Dr. Clark received his premedical training at Mississippi College, Clinton, and graduated from Tulane University Medical College of Louisana with M.D. in 1923. He was assistant superintendent of the Mississippi State Charity Hospital, Vicksburg, 1923-1926. He has been internist at the Vicksburg Sanitarium and Street Clinic, Vicksburg, since 1926. He became a fellow in the American College of Physicians in 1930, and was certified by the American Board of Internal Medicine in 1939.

Subject: "Arthritis, Some More Recent Clinical Aspects."

DR. F. A. WILLIUS
ROCHESTER, MINN.

Dr. Willius was born Nov. 24, 1888, at St. Paul, Minn. He received the degrees of B.S., M.D., and M.S., from the University of Minnesota. He entered The Mayo Clinic as an assistant in general diagnosis and electrocardiography in 1915, and is now head of the section on cardiology. He is a fellow fo the American College of Physicians, a member of the American Medical Association, the American Congress of Internal Medicine, the American Heart Association, the Minnesota Health Association (president in 1925), and the Central Society for Clinical Research. He is also a member of Phi Rho Sigma and Sigma Xi.

Subject: "Hypertensive Heart Disease"

MR. LEW WALLACE
LAUREL MISS.

Mr. Wallace was born at Sandersville, Mississippi, March 21, 1900, but has lived at Laurel since he was six months old. He began delivering medicines on a bicycle when he was twelve years of age and has been identified with the drug business since that time. He was twice graduated from the University of Mississippi in the School of Pharmacy. He is a Mason and a member of Phi Psi fraternity.

His membership on the State Board of Pharmacy dates back to 1928 and he has been secretary of the board since 1930. Since 1934, he has been engaged in pharmacy law enforcement work. For six years he has helped check the increasing addiction to narcotic drugs.

Throughout his twenty-two years as a practicing pharmacist, he has never failed to take advantage of each opportunity to raise his voice against the evils that beset pharmacy. He has argued consistently that the physicians and pharmacists should not neglect the U. S. P. and N. F. but take advantage of the protection afforded by their nomenclature, and maintain the mystery that rightfully belongs to medicine.

Subject: "What the Pharmacist Means to the Physician."

Section on Surgery

DR. THOMAS H. BLAKE, Chairman
JACKSON, MISS.

Dr. Blake was born at Sheffield, Alabama, June 23, 1904. He received his M.D. degree from the University of Tennessee in 1929. After an internship at Memphis General Hospital, he studied surgical pathology under Dr. Joseph H. Bloodgood, Johns Hopkins Hospital, Baltimore, Md., accepted a fellowship in orthopedic surgery at Willis C.

Campbell Clinic, Memphis, Tenn., and a residency in orthopedic surgery in Los Angeles County General Hospital, Los Angeles, Calif. He entered practice at Jackson, Miss., in July, 1934. His practice is limited entirely to orthopedic surgery.

Dr. Blake is a member of the American Medical Association; Southeastern Surgical Congress; the Clinical Orthopedic Society; the American Academy of Orthopedic Surgery; Certified by the American Board of Orthopedic Surgery. He is also medical director of the State Crippled Children's Service, being the orthopedist to that organization.

Subject: "Low Back and Sciatic Pain."

DR. M. L. FLYNT, SR.
MERIDIAN, MISS.

Dr. Flynt is the senior member of the Flynt Medical and Surgical Clinic, which was organized in April, 1940. At this time, Dr. Roger Mayo Flynt entered practice with him, and in January, 1941, Dr. M. L. Flynt, Jr., joined the clinic. The two sons, prior to this time, operated the Newton Infirmary, Newton, Miss.

Dr. Flynt was graduated from the University of Tennessee in 1908, and since then has been practicing surgery in Mt. Olive, D'Lo (where he was superintendent of the Pineview General Hospital), Newton, and Meridian, Miss.

Dr. Roger Mayo Flynt and Dr. M. L. Flynt, Jr., were graduated from Tulane University in 1934 and 1936, respectively, and after serving their internship practiced in Newton until they joined their father in forming their present clinic.

Subject: "Pediatric Surgery."

DR. J. ALBERT KEY
ST. LOUIS, MO.

Dr. Key is a native Mississippian, born in Jackson, Mississippi, in 1890. He received his B. S. degree from Alabama Polytechnic Institute, 1913; and M.D., Johns Hopkins Medical School, 1918. He was instructor of anatomy at Creighton, 1915-16, lieutenant, M.C., 1917-19; resident house officer, Children's Hospital, Boston, 1919-20, Massachusetts General Hospital, 1920-22; instructor applied physiology, Harvard, 1921-22; orthopedic surgery, Maryland, 1922-24. He spent from 1925-1931 in the research department of the Shriners' Hospital for Crippled Children, St. Louis. He has been clinical professor of orthopedic surgery, Washington University School of Medicine since 1931.

Subject: "Compound Fractures."

DR. EDWARD W. HOLMES
WINONA, MISS.

Dr. Holmes is a native of Winona, Miss. He received his B.S. degree from the University of Mississippi in 1925, and his M.D. from Tulane University in 1928. He is now surgeon-in-charge of the Winona Infirmary, Winona, Miss. He is a member of the county, state, Southern Medical Association, and a fellow of the American College of Surgeons.

Subject: "The Acute Abdomen."

DR. J. A. BIRCHETT, JR.
VICKSBURG, MISS.

Dr. Birchett, member of a family long prominent in medical circles, was graduated from Tulane University of Louisiana School of Medicine in 1920. He is a fellow of the American College of Surgeons, a member of the American Medical Association, the Southeastern Surgical Congress and is surgeon on the staff of the Vicksburg Sanitarium.

Subject: "Clinical Study of Carcinoma of Uterus."

DR. THOMAS R. RAMSAY
LAUREL, MISS.

Dr. Ramsay was born at Laurel, Miss., Feb. 3, 1907. After premedical work at University of Mississippi he took his M.D. from Tulane University in 1931. An internship at Southern Baptist Hospital, 1931-32, and a cruise to Central and South America, visiting clinics in Panama, Cuba, Brazil, Uraguay, and Argentina, preceded service as house surgeon in South Mississippi Charity Hospital 1933-1934. In 1936 he visited clinics of England, France, Sweden, Finland, Russia, Germany, Austria, Hungary, Italy and Switzerland, returning to Laurel to do private practice and to devote his time to general and industrial surgery. In 1939 he established the Ramsay Clinic. Dr. Ramsay is assistant to chief surgeon of the G. M. & O. Railroad; surgeon to Mengel Company, Laurel, Miss., district surgeon for Missouri and Pacific Railroad; and president-elect South Mississippi Medical Association.

Subject: "Injection of Varicose Veins."

News and Comments

Dr. Felix J. Underwood, the executive officer of the Mississippi State Board of Health, who has been appointed by President Roosevelt as a delegate to the Pan-American Child Health Congress which will meet in Washington, May 5-9. The seventh and last Congress was held in Mexico City in 1935. Dr. Underwood was a delegate to this meeting. President Roosevelt could have made no better selection than Dr. Felix J. Underwood, our own state health officer. He is one of the best in this nation.

Dr. Thomas D. Moore, 899 Madison Ave., Memphis, Tenn., announces the association of Dr. Donald A. McCannel for the practice of urology and urological surgery.

Dr. George S. Stevenson, medical director of the National Committee for Mental Hygiene, has been elected president of the National Health Council for 1942. Dr. Stevenson succeeds Dr. Kendall Emerson, managing director of the National Tuberculosis Association, who becomes vice-president and chairman of the Executive Committee.

COMING MEDICAL MEETINGS

Mississippi State Medical Meeting—Jackson, Miss., May 12, 13, 14, Robert E. Lee Hotel.

American Medical Association — Atlantic City, June 8, 9, 10, 11, 12.

Southern Medical Association, Richmond, Va., November 9, 10, 11, 12.

MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION AND COMPONENT MEDICAL SOCIETIES

Dear Doctors:

A resolution was adopted at the regular meeting of the Central Medical Society on Tuesday, April 7, pledging the society to pay the state dues and remit the local society dues to all members of the society in good standing who are now in the armed forces for the duration of the war. We believe that it will be a good idea for all of the local medical societies to do this all over the state of Mississippi. We are, therefore, addressing this communication to you through the *Mississippi Doctor*. There will no doubt be some similar action taken by the House of Delegates at the State Medical Association at its regular meeting in Jackson on May 12.

While addressing this communication to you, I would like to extend a cordial invitation to every physician in Mississippi to attend the Mississippi State Pediatric Society which meets on Monday afternoon and night, May 11, before the State Medical Association on the following Tuesday morning. In addition to the local talent who will be on the program, we are going to have as our guest speaker, Dr. Julius H. Hess of Chicago. Dr. Hess is an outstanding authority on pediatrics and the author of several books on that subject. He will speak in the afternoon on the subject of "The Celiac Syndrome Predisposing Factors and the Treatment," and at night on the "Care of the Premature." I am sure you will enjoy as well as be profited by attending this meeting.

Sincerely yours,

Harvey F. Garrison, M.D. State Chairman American Academy of Pediatrics.

NOTICE

The public meeting on Wednesday evening, May 13, will be held at the Heidelburg Hotel in the Victory Room, instead of at the Robert E. Lee Convention Hall as announced in the official program. The meeting will begin promptly at 8:00 p.m.

SCIENTIFIC EXHIBITS

The following are among the list of scientific exhibitors for our state meeting. Dr. Lippincott is in charge of the scientific exhibits. He will aid any one in any way. We need to show our medical progress by more of them. —Editor.

Exhibit of the American Society of Clinical Pathologists—Drs. John C. Henthorne and Leon S. Lippincott. Booth required, 14 feet long with 8-foot sidewalls. One ordinary electrical wall plug, 110 volts, A.C. Small table for literature and two chairs.

Mississippi Baptist Hospital, Dr. John C. Henthorne:

(1) Cancer of the Gastrointestinal Tract—Drs. R. Lee Clark, Jr., and L. S. Meriwether.

(2) Ulcifying Fibroma of the Jaw.—Drs. Robin Harris and V. D. Hagaman.

The first will occupy a space 6 feet by 4 feet high and will consist of a panel display by transillumination. The front will sit about two feet from the wall and will require an electrical connection.

The second exhibit consists of photographs to be displayed on a panel roughly four feet square.

Rush's Infirmary—Dr. Leslie V. Rush. Exhibit of photograph and artist's drawings demonstrating Displacement, Characteristics and Treatment of Fractures of the Upper Extremity. Requires wall space of 35 feet, there being fourteen card boards, 44 inches high and 28 inches wide, to be mounted.

Vicksburg Sanitarium—Miss Lucille Espenan. Booth 14 feet long with two 6 to 8 feet panels.

Mississippi State Hospital—Dr. Clyde M. Speck. Occupational Therapy Exhibit. No specifications given.

Committee on Arrangements

General Chairman—Lawrence W. Long.

Honorary General Chairman—H. F. Garrison, Sr.

Ex-Officio Member—L. B. Austin, President.

Vice-General Chairmen: Robin Harris, W. R. Bethea, A. G. Wilde.

Honorary Vice-General Chairmen: J. W. Barksdale, W. B. Dobson, Hardie Hays, C. F.

McKenzie, S. H. McLean, L. B. Neal, G. W. F. Rembert, H. R. Shands, F. J. Underwood, F. L. Van Alstine, J. C. Walker, J. P. Wall, Willis Walley, N. C. Womack.

Secretary: J. G. Thompson.

Executive Committee: H. F. Garrison, Sr., L. W. Long, J. G. Thompson, D. W. Jones, F. J. Underwood, H. C. Ricks.

Finance: D. W. Jones, Chairman, A. L. Gray, C. M. Speck.

Program: Charles Ward, Chairman, T. H. Blake, Fred Hollowell, R. N. Whitfield, L. Q. Hall, Leonard Wright.

Entertainment: H. C. Ricks, Chairman, Temple Ainsworth, G. C. Verner, A. G. Ward, J. O. Segura.

Membership: H. C. Sheffield, Chairman, H. F. Magee, W. H. Simmons, M. L. Batson, R. T. Stephenson.

Hotels: G. C. Russell, Chairman, I. C. Huggins, Lee Lipscomb, D. V. Galloway, J. C. Henthorne.

Radio: H. F. Garrison, Jr., Chairman, P. R. Greaves, S. J. Hooper, M. J. Dugger, S. S. McNair, W. E. Noblin, Sr.

Publicity: A. E. Gordin, Chairman, B. C. Edwards, J. S. McIntosh, F. E. Werkheiser, N. C. House, D. T. House, D. T. Brock

Alumni Reunion: O. A. Schmid, Chairman, J. A. Chustz, Lee Clark, G. E. Riley, Smythe Howard, B. N. Walker.

Luncheons: J. W. Lipscomb, Chairman, R. E. Anderson, J. G. Blaine, L. T. Carl, T. W. Kemmerer, J. T. Weeks.

Scientific Exhibits: R. B. McLean, Chairman, Brister Ware, J. S. Harter, R. C. O'Ferrall.

Hobbies, including golf, shooting, fishing—G. E. Adkins, Chairman, J. F. Armstrong, V. D. Hagaman, T. M. Moore.

Information: J. A. Milne, Chairman, J. G. Dees, H. B. Cottrell, F. E. Rehfeldt, Cecil Walley.

Transportation: W. L. Hughes, Chairman, L. S. Meriwether, George Owens, W. H. Hall, B. J. Marshall.

Ladies' Entertainment: Mrs. W. L. Hughes, Chairman, Dr. Maud Gerdes, Dr. Estelle Magiera.

TENNESSEE MEETING WELL ATTENDED

In Memphis, at the South's finest and one of America's best hotels, the hundred and ninth annual convention of the Tennessee State Medical Association convened Tuesday April 14, 1942. Associated societies such as the State Pedriatic, the Eye, Ear, Nose and Throat, the Radiological and the Woman's Auxiliary had their respective meetings.

Delightful daughters of Memphis doctors for a stipend pinned to the lapel of the doctors' coats a mercy emblem of the Allied Medical and Surgical Relief.

Dr. Hiram A. Laws, Jr., of Chattanooga, president, speaking on "Medicine in the Armed Forces of our Country," said: "Facing the greatest challenge in its history now is providing adequate care for the largest armed forces the United States has ever known, the profession of medicine is meeting this problem in the best traditions of a service that extends back through all the wars in our history to George Washington's day."

From the moment that Paul Revere made his famous ride, medical men have played a prominent part in our nation's wars. More surgeons died in the American Revolution, in proportion to their numbers, than officers in the line. Surely it is superfluous in the light of their past record and in the presence of this world crisis to urge our physicians to do their best, for how could they do otherwise? Medicine in the armed forces of our country will carry on, and in the best traditions.

Colonel Fred W. Rankin of Lexington, Ky., president-elect of the American Medical Association and now a consultant in the United States surgeon general's office in Washington, among other things said in his talk, "The Doctor's Part in War Mobilization": "More than six doctors are needed for every 1,000 men in the United States Army. The task of supplying this quota of physicians has been assigned to the medical profession itself in order to avoid disrupting medical services now being rendered by the nation's 150,000 doctors. Army expansion is causing a definite drain on the supply of physicians in the United States, but it is the object of the Procurement and Assignment Agency to meet the demand intelligently."

Dr. Edgar H. Greene of Atlanta, chairman of the Fourth Corps Area Committee on Procurement and Assignment, has this to say of it: "It is set as a defense organization by the American Medical Association to reach every county in the nation and has collected data on every physician in the United States. The business of the agency is to draw upon the ranks of the medical profession both for civilian and for military needs without disturbing the status quo."

Physicians must be made to realize that they can not do business as usual. Mississippi is in the Fourth Corps Area.

It is clearly realized that the medical profession will be one of the first groups to feel the effect of the draft and assignment to war and allied work. The effect upon civilian health will not be disregarded.

Many good papers were presented, among them an elucidating thesis on "The Internist's Problem of Backache," by Dr. Henry B. Gotten of Memphis. "Backache presents symptoms of varied pathological conditions and the physicain is wise who can relate it to its proper setting," he averred.

Dr. James S. McLester of Birmingham, a past-president of the American Medical Association and one of the nation's foremost authorities on diet and nutrition, said: "Many people who are only vaguely ill, feeling neither sick nor well, are the victims of improper diet, which could be easily remedied. The most common symptoms of this condition are a general run-down feeling, constant fatigue and irritability.

"Fads, fancies, taboos and customs, both familial and racial, must be overcome, as well as gross ignorance. Such a program of education demands the participation of all responsible agencies, such as schools, universities and health organizations and, most important, it demands the sympathy and the encouragement of the medical profession. The grocer and dairyman have these vitamins and minerals as well as the pharmacist.

"The war may be long and exhausting, but it will be won or lost in the nation's industrial plants, and the success of these plants will depend largely upon the stamina and the vigor of their workers."

Dr. James B. Stanford, eye specialist of Memphis, was installed as president. Dr. Stanford is a physician of note and will make a most worthy president.

Dr. O. N. Bryan of Nashville is president-elect. Mrs. Walter A. Ruch of Memphis was elected president-elect of the Woman's Auxiliary.

The social features for the members and guests were by no means neglected.

The 1943 meeting will be held in Knoxville.

The Southern Hospital Association Conference recently held a meeting in Memphis. President Thomas H. Haynes said that the meeting would attempt to solve some of the war-time problems besetting the country's hospitals. Economy was emphasized, conservation of all hospital supplies, use of four inches of bandage in place of six, if four will do the job, using two pins in place of four if two will do the job rightly. There will, however, always be a need for a certain amount of material and it must be had regardless of the conditions. This is where priorities come into the picture and were one topic for discussion. Many phases of hospital work and management were discussed.

Probably most of you read the Associated Press item from Anniston, Ala., in which a physician applying to the Rationing Board for a permit to buy a new automobile was asked if he was "engaged in the production of war materials." He answered, "During the month of March, 1942, I attended the birth of 31 babies and had to miss several more because of my inability to get to them. I will average above 20 a month throughout the year and this practice alone necessitates the use of a new car as these cases must be attended to at once when I am called. I believe it would come under war materials, maybe not for this war, but for the next one."

The board's decision on the request has not been announced.

The 39th Semi-Annual Meeting of the Delta Medical Society convened in the courthouse at Rosedale on April 8, 1942. J. D. Simmons, M.D., is president, J. C. Adams, M.D., is president-elect and F. M. Acree, M.D., is the secretary-treasurer.

Rosedale is a delightful Delta town, and the program was unusually good.

The intrepid and undaunted General Douglas MacArthur has many namesakes throughout the appreciative nation and it seems that his lovely wife has namesakes also. She is from Murfreesboro, Tennessee.

We will miss the genial and friendly Dr. Rowland W. Hall of Jackson, who died recently. We had the pleasure of Hall's friendship throughout the years. He was a successful physician and a Christian gentleman.

—L. L. Minor

Deaths

These very familiar faces will be sincerely missed at the coming Mississippi State Medical meeting.

C

Dr. Sidney Johnston of Vicksburg was a past-president of the association. A great medical spirit was Dr. Johnston. He entered into the pleasures, joys and sympathies of his people. He loved the state association and its members loved him devotedly.

C

Dr. R. W. Hall of Clinton pioneered in dermatology for his state. He was known and loved by the Mississippi College boys who passed that way over a period of more than a quarter of a century. They were inspired by his kindness and his sincere interest. He did fine work with the State Board of Health for many years. He was a doctor with a vision and practical application.

C

Dr. W. E. Noblin of Jackson remained in the forefront of medicine in the state for many years. He was a past-president of the Central Medical Society. No man in the state has been more active in the state association for the last twenty-five years.

Dr. Evan Moody Gavin, of Stafford Springs, Miss., state senator from Clarke and Jasper counties, suffered a heart attack while on the floor of the senate and died shortly after, Wednesday, March 18, 1942. Dr. Gavin was born in Choctaw County, Ala., Jan. 25, 1887. He received his medical education at the University of Alabama, Tuscaloosa, Ala., graduating in 1910; was licensed to practice in Mississippi in May, 1909. He also attended Louisville Medical College and Harvard University. He was a captain of the medical unit during the first World War and afterward practiced medicine at Richton. Dr. Gavin was a member of the Mississippi State Board of Health in 1922. Surviving are his wife, one son, David Charles Gavin, three daughters, Mrs. Evelyn Mills, Miss Janie Gavin and Miss Anita Gavin.

Dr. James Eldred Miller died at his home in Huntsville, Ala., February 27, 1942, following a heart attack. Dr. Miller was a well-known eye, ear, nose and throat specialist. He was a native of Marshall County, born at Laws Hill, July 4, 1882. He received his medical education from the Memphis Hospital Medical College, Memphis, Tenn., graduating from there in 1911; also graduated from Tulane University. He practiced medicine in Marshall County before going to Huntsville in 1929. He was later president of the Madison County Medical Society in Alabama. Survivors are his wife, two sons, James Eldred and John of Huntsville; two sisters, Mrs. Harry Orr and Mrs. Louis Wilson; and two brothers, Ernest Miller and A. R. Miller.

Dr. W. W. Parkes, Louisville, Miss., died at the Louisville hospital, March 21, 1942, following an operation. Dr. Parkes was born in Philadelphia, Miss., June 16, 1868. He had practiced medicine in Louisville and vicinity for nearly fifty years. He received his medical education at the Louisville Medical College, Louisville, Ky., graduating in 1882. Dr. Parkes was a member of the Methodist Church. He was most active and took a keen interest in all civic and community activities. He is survived by a son, Roger C. Parkes; three daughters, Mrs. John McAuley, Mrs. Walton Owen, and Mrs. Roy Lancaster.

Dr. W. E. Noblin died at his home in Jackson, Miss., March 18, 1942, following a heart attack. Dr. Noblin was 66. He was born in 1875 at Homewood, attended Edwards High School and received his medical degree from the University of the South at Sewanee, Tenn. He also studied at Vanderbilt University and served his internship at the state charity hospital in Vicksburg. He practiced in Yazoo County from 1900 to 1927. Since that time he directed the Hinds County and city of Jackson health office. Dr. Noblin served as president of the Central Medical Society in 1940. He is survived by his wife; two sons, Dr. W. E. Noblin, Jr., in the U. S. Army and John Noblin, also in the Army, at the Albany, Ga., air base.

DOCTORS' GOLF ASSOCIATION

In response to many requests from doctors over the state, plans are afoot at the Mississippi State Medical meeting in Jackson to provide a golf tournament for visiting physicians. With President A. Street's approval, Dr. B. B. O'Mara of Biloxi is calling a meeting of all golf enthusiasts with the view of forming a permanent organization.

Doctors need to play more, and especially do they need respite from the pressure brought on by the war emergency. All doctors of the state association are eligible for participation, and all who are interested will be invited to join Dr. O'Mara's group in Jackson.

Book Reviews

IMMUNITY AGAINST ANIMAL PARASITES, by James T. Culbertson, Assistant Professor of Bacteriology, College of Physicians and Surgeons, Columbia University. 274 pages, with illustrations, charts and tables. Price $3.50. Published by Columbia University Press, New York.

Dr. Culbertson planned this book primarily as a textbook for those beginning the study of immunity to the parasitic forms. He has made an effort to cite all significant studies made in the twelve years since 1929. This makes it of particular value to the trained investigator, as well as to the practicing physician or veterinarian.

The subject matter is treated in three parts. Part One covers natural resistance, age resistance, specifically acquired immunity, requisites for immune response, parasites which elicit immunity, mechanisms of specific immunity and demonstration of immunity. In Part Two, immunity in specific diseases, the amoebiases, leishmaniases, trypanosomiases, malarias, coccidioses, trematodiases, cestodiases, nematodiases and response to arthropods are discussed separately. The last part is divided into classification of parasites, vaccination against parasites and diagnosis of parasitic infection.

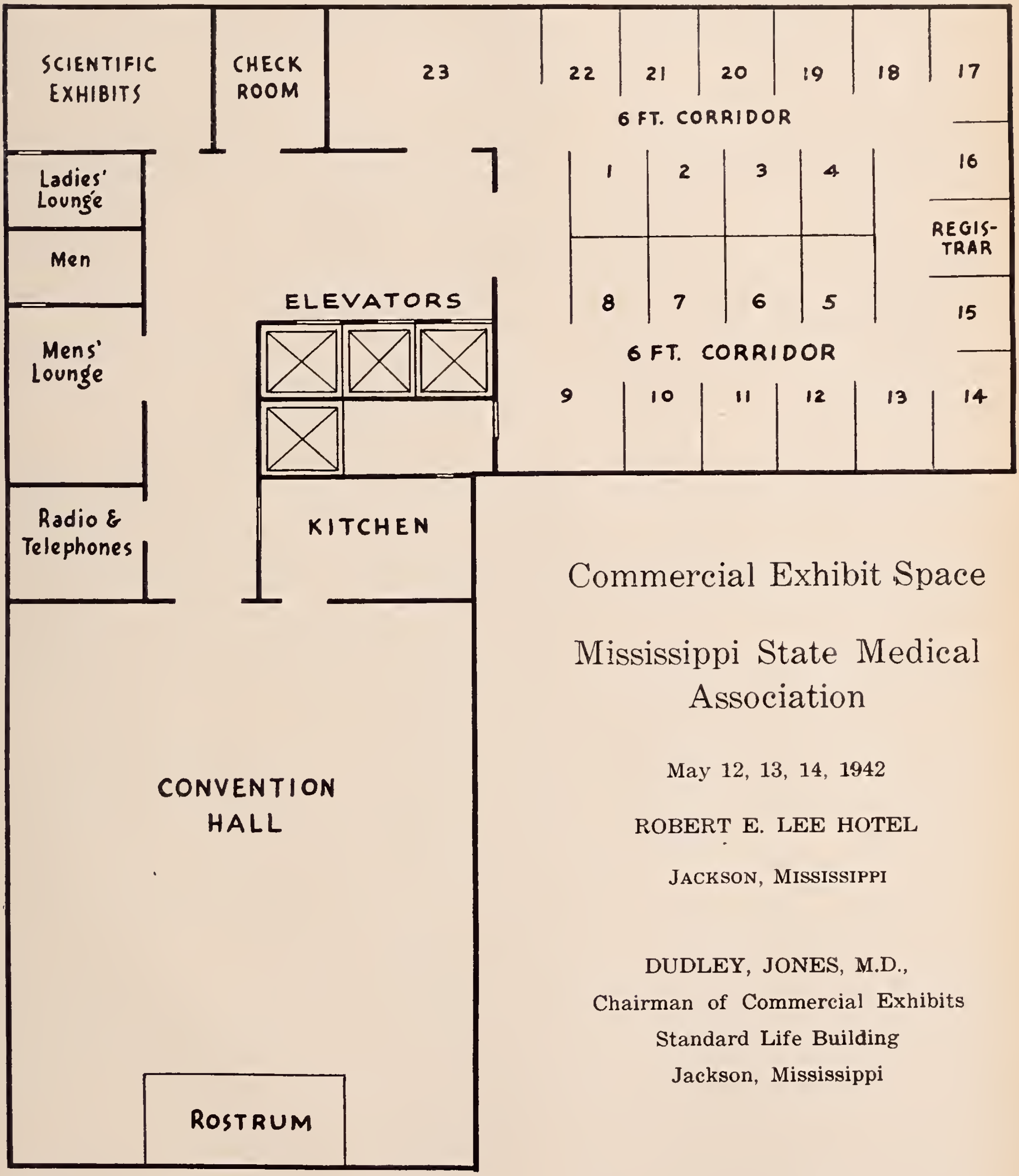
Detailed references, alphabetically arranged in a seven-page list included in the volume, will be useful to those interested in further study of immunology. The book is indexed.

THE PUBLIC HEALTH NURSE IN ACTION, by Marguerite Wales, R.N., F.A.P.H.A., Nursing Education Consultant, W. K. Kellogg Foundation, Battle Creek, Michigan. Formerly General Director, Henry Street Visiting Nurse Service, New York City. Published by The MacMillan Company, New York City. 437 pages.

This very readable book shows how the principles of public health nursing are being applied by nurses in the field. Marguerite Wales has gathered case studies and reports from nurses in all parts of the U. S. to present this work. These case histories, though factual, are written in narrative form so humanly, and often so humorously, they are easily and rapidly read. In each instance the principle of nursing, with the problem, is noted, together with the nurse's approach to the patient and family. An especial emphasis is placed on the psychology of handling patients, their emotional reaction, and on the mental hygiene of the people involved in each history.

The chapters cover these important principles: care of mothers and babies, infant and preschool, school child, communicable diseases, tuberculosis as a problem, orthopedic nursing, syphilis and gonorrhea, chronically ill patients, and industrial nursing service. Each chapter has a list of good references.

This book will be useful to the nurse doing work in this field and to the nurse in training, as well as to the physician. It is recommended to school teachers, students of sociology and to public welfare workers. It is an excellent book to place in the hands of a girl who is considering nursing as a profession. Price $2.75.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Mississippi State Medical Association

May 12, 13, 14, 1942

ROBERT E. LEE HOTEL

JACKSON, MISSISSIPPI

DUDLEY, JONES, M.D.,
Chairman of Commercial Exhibits
Standard Life Building
Jackson, Mississippi

Mississippi State Medical Association

Organized 1867

Next Meeting: May 12, 13, 14, 1942, Jackson

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COMPONENT SOCIETIES

County Society	President	Secretary-Editor	Time of Meeting
Adams	J. S. Ullman, Natchez	L. S. Gaudet	Third Tuesday 7:30 p.m.
Alcorn	D. W. Hamrick, Corinth	R. H. DeJarnette, Corinth	Third Friday, 6:30 p.m.
Amite	D. H. Thornhill, Crosby	W. T. Thornhill, Crosby	Second Thursday 7:30 p.m.
Central Medical	R. B. Austin, Forest	James G. Thompson, Jackson	First Tuesday 6:30 p.m. July and August
Claiborne		G. W. Acker, Port Gibson	
Clarksdale and Six	J. P. Walker, Marks	Guy R. Post, Clarksdale	1st Wed. Mar. & Sec. Wed. Nov.
Clarke-Wayne	W. P. Gray, Waynesboro	Albert Hand, Shubuta	
Coahoma	L. H. Brevard, Clarksdale	Julius L. Levy, Clarksdale	
Coast Counties	B. Z. Welch, Biloxi	D. L. Hollis, Biloxi	1st Wed. each month
Delta Medical	J. D. Simmons, Cleveland	F. M. Acree, Greenville	Sec. Wed. April & Oct., 2 p.m.
DeSoto	C. W. Emerson, Hernando	L. L. Minor, Memphis, Rt. 4	First Mon. Jan., Apr., Jul., Oct.
East Mississippi	W. R. Hand, Louisville	N. C. Knight, Meridian	Quarterly
Franklin	C. A. Everett, Bude	L. Costley, Meadville	
Issa-Shar-War.	Hugh Johnston, Vicksburg	W. K. Purks, Vicksburg	
Jefferson	C. R. Senter, Byhalia	H. Phillips, Holly Springs	Second Thursday
Jones	J. S. Gatlin, Laurel	T. Paul Haney, Laurel	Second Friday, 7:30 p.m.
Lauderdale	T. G. Cleveland, Meridian	R. L. Donald, Meridian	
Marshall		W. T. Harper, Fayette	
Newton	Z. C. Hagan, Union	Dudley Stennis, Newton	
North Mississippi	D. C. French, Water Valley	A. H. Little, Oxford	Third Wed., Jan., April, July, Oct.
Northeast Miss.	Stanley A. Hill, Corinth	A. J. Stacy, Tupelo	Sec. Tue., Mch., June, Sep., Dec.
Pike	J. M. Smith, Magnolia.	V. S. Holmes, McComb	First Thursday
Pontotoc	W. H. Reid, Toccopola	E. B. Burns, Ecru	
South Miss.	H. G. Cook, Hattiesburg	J. P. Culpepper, Jr., Hattiesburg	3rd Tues., Mch., June, Sep., Dec.
Sunflower		H. B. Cottrell, Indianola	
Tallahatchie	G. Lacy Biles, Sumner	J. E. Powell, Charleston	
Tate	W. D. Smith, Senatobia	J. S. Eason, Coldwater	Second Wednesday
Cop-Law-Lin-Wal.	J. J. Pittman, Tylertown	R. B. Zeller, Hazlehurst	Sec. Tue., Mch., April, June, Dec.
Webster	E. T. Arnold, Bellefontaine	H. K. Curry, Eupora	
Wilkinson	S. E. Fields, Centerville	R. J. Field, Centerville	
Winona District		S. B. Caruthers, Grenada	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Eye—Alston Callahan, Vicksburg.

Ear, Nose and Throat—Edley Jones, Vicksburg.

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Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

PEDIATRICS

COMBINED VACCINATION AGAINST SMALLPOX AND DIPHTHERIA, Reh, T., Schweizerische Medizinische Wochenschrift, 71:1368 (November 1) 1941.

Combined vaccination against smallpox and diphtheria was done in 1932 by Kinichowicki on 114 children, ranging in age between 20 months and 3 years, without preliminary Schick reaction; the smallpox vaccination was done simultaneously with the first injection of 0.5 cc. of Ramon's anatoxin, followed three weeks later by injection of 1.0 cc. of anatoxin, and another three weeks later by a third injection of 1.0 cc. of anatoxin. The Schick reaction was afterwards found positive in only 4 out of 105 children. There was no untoward reactions.

Stern immunized 100 children simultaneously against smallpox and diphtheria using the single injection method of diphtheria vaccination together with the classic method of smallpox vaccination, one in the deltoid region of the right arm, the other in the same region of the left arm. The Schick reaction was afterwards negative in 95 per cent of the cases, and 98 per cent proved refractory to repeated smallpox vaccination.

In Italy, combined immunization against diphtheria and smallpox has been made mandatory by law. It is carried out at the end of the first year of life, using two anatoxin injections at an interval of 15 to 20 days and smallpox vaccination simultaneously with the first of them. The result of the smallpox vaccination is judged at the time of the second anatoxin injection and the procedure is thus considerably simplified.

The author's own experience in Geneva is limited to 19 children between the ages of 1 and 5 years. At the time of the first visit, the smallpox vaccination was carried out, on the arm in boys, on the leg in girls, followed by injection of 1.0 cc. of diphtheria anatoxin into the contralateral superscapular region; three weeks later, the result of the smallpox vaccination was judged and an injection of 2.0 cc. of anatoxin was made. Another three weeks later, the immunity to diphtheria was tested by means of the cutireaction. There were no untoward reactions in this series. The cutireaction could be carried out in only 14 of the 19 children and a diphtheria toxin of increased strength, as suggested by the author in 1934, was used; the cutireaction was found negative in all 14 cases.

The author states that combined vaccination against smallpox and diphtheria constitutes a progressive step as it affords simplification of the procedure and furthermore proves more effective than separate immunizations.

WHOOPING COUGH VACCINE, Leila Daughtry-Denmark, M.D., Atlanta, Georgia.

This is quite an interesting article on whooping cough vaccine. The author goes into the subject thoroughly and discusses the various phases as well as types of vaccine. In his conclusion on this subject the author has the following to say:

"Since March 1933 my associates and I at the Central Presbyterian Church Clinic for Children have conducted a continuous clinic for treating whooping cough and studying immunization. Comparative results obtained from the use of the various vaccines are presented. From the studies that have been made the following conclusions are reached:

1. A potent vaccine is necessary.

2. All children are not immunized alike, and no standard dosage can be prescribed.

3. There should be some method of determining the degree of immunity.

4. The complement fixation test is accurate but is complicated.

5. The bedside agglutination test seems to be the answer to this problem, as it produces approximately the same result as the complement fixation test.

6. To obtain immunization with Sauer's regular pertussis vaccine (10 billion count), it is necessary to give as much as 14 cc. in some cases. With 20 billion count pertussis vaccine the maximum requirement is 7 cc.; with 40 billion count pertussis vaccine, 4 cc.; with alum-precipitated 20 billion count pertussis vaccine, 2.5 cc.; with 40 billion count alum-precipitated, 20 billion count, 2.5 cc.

7. The effectiveness of the vaccine is determined not by the number of organisms received but by the rate of absorption.

8. Therefore, the 40 billion count pertussis vaccine or the 40 billion count alum-precipitated pertussis vaccine gives the best results.

9. The combined diphtheria toxoid and pertussis vaccine produces good results, but the pertussis organism count should be increased from 20 billion to 40 billion. The amount of diphtheria toxoid is sufficient to give a negative Schick reaction.

10. Combined pertussis vaccine and diphtheria and tetanus toxoids, alum-precipitated, shows excellent possibilities for the giving of three immunizations in one; however, the pertussis organism count in this vaccine should be increased to 40 billion.

Comment

It will be seen by the two abstracts above that apparently the tendency toward combining vaccines is gaining ground. As will be seen in this abstract, the author is advocating the use of the combination of pertussis, diphtheria, and tetanus toxoids alum-precipitated vaccine, but he suggests, which I am sure is correct, that the pertussis organism should be increased to 40 billion. The same thing applies to the combination of diphtheria and whooping cough vaccine. I see no reason why we should not vaccinate a child against smallpox in one arm and give him the other combined vaccines in the other arm. Yet it might be better to give him the combined whooping cough, diphtheria, and tetanus vaccine and wait a week before vaccinating him for smallpox. It will not be long, I am sure, before we will be giving these combined vaccinations all at the same time, but I would suggest that it be done with some caution even though there is practically no danger in doing so.

—H. F. G.

State Board of Health

Felix J. Underwood, M.D.

MALARIA CONTROL IN MILITARY AREAS

The Division of Sanitary Engineering of the State Board of Health, in coöperation with the United States Public Health Service, is organizing a program of larvicidal malaria mosquito control in areas contiguous to army, navy, and war industrial establishments throughout the state. The purpose of this program is primarily to protect troops and defense workers against a malady capable of wrecking the efficiency of the war effort if left free to spread its ravages unchecked.

Although malaria incidence has been constantly decreasing in Mississippi—deaths from this cause decreased from 695 in 1933, to an all-time low of 168 in 1940—it is the opinion of malaria control authorities of the State Board of Health that a more or less serious problem might develop in certain vital areas unless steps are taken immediately to eliminate the Anopheles mosquitoes and their breeding places. Much progress has been made during the last eight years, breeding areas having been eliminated in 225 towns in 76 counties, affecting more than 30 per cent of the general population. Extensive work has been carried on through the coöperation of such agencies as the Works Projects Administration and the State Highway Department which has made it possible to accomplish much effective drainage work. Many miles of concrete ditch have been constructed, underground tile or drains have been laid, and swamps and ponds have been filled, eliminating breeding areas of the mosquitoes, and thus providing protection against malaria.

Notwithstanding this excellent progress and the relatively low incidence of malaria in the state during the past few years, it is recognized that the *Anopheles quadrimaculatus* does have breeding areas near many of vital industry and camp locations in the state and that it is urgently important to institute control measures without delay and maintain a constant vigilance against this invader. The United States Public Health Service has detailed several engineers to the state in order to prosecute such a program in coöperation with the State Board of Health. Work will be organized at such strategic areas as Keesler Field, the Ingalls Shipbuilding Yard, the United States Army Recreational Area at Gulfport, Camp Shelby, the Jackson Air Base, the Meridian Air Base, the Mississippi Ordnance Plant, the Mississippi Institute of Aeronautics, the Greenville Air Corps Training School, and Kaye Field near Columbus. It is estimated that the control measures proposed will afford protection to approximately 150,000 men.

The larvicidal malaria control measures to be used involve the spraying of oil, Paris green, or pyrethrum larvicide in areas one mile adjacent to cantonments. This one-mile zone has been selected because it is well known that the malaria mosquito practically never flies more than a mile to get a blood meal. Consequently, if these one-mile zones can be kept free of the Anopheles mosquito, the chances of military personnel getting malaria will be very greatly reduced. In addition to the larvicidal program the State Board of Health is coöperating with the Works Progress Administration in carrying out malaria control drainage projects at some of these areas.

* * *

PUBLIC HEALTH PERSONNEL ORGANIZES FOR HOME DEFENSE

The personnel of the State Board of Health has been organized for efficient action in the event of attack by the enemy or other civilian disaster, in order that employees may have the protection afforded by such a plan. The following committees have been appointed and are active: (The plan follows that advocated by the Office of Civilian Defense).

MEDICAL
First Aid
(including medical and dental activities)
Supplies and equipment (chemical heating bags, etc.)
Teams—who is to render first aid (special reference to gas decontamination stations, etc.)
Stretcher Teams
Make stretchers.
Practice stretcher bearing.
Storage (available in building.)

SANITATION
Water Supply
Purity of water (chlorine tablets)
Locate largest cooler to be found.
Bucket brigade (buckets and water supply). Delegate to one person filling buckets and cooler.
Arrangements to turn off water.
Arrangements for commode and lavatory.

FOOD
Emergency kitchens and canteen service.
Supply depots. Storage.

CLOTHING
Blankets, sheets, extra coats and warm wraps.

RECREATION AND MORALE
Battery radio, portable phonograph and records.
Song sheets, games. Playing cards and tables.

GUIDANCE, MAINTENANCE OF PUBLIC ORDER, INTELLIGENCE AND COMMUNICATION
Supervision of evacuation to refugee centers.
Rules, such as no smoking, no telephone calls, etc.
Drills. Written instructions.
Instructions with regard to knapsack.
Preparations, such as moving furniture from hall, seeing that supplies are available, etc.

FIRE PREVENTION
Adequate fire extinguishers to take care of fires and bombs.
Sand boxes and bags.
Buckets of sand and shovels.
Volunteer fire fighters—drilled and trained.

STORAGE COMMITTEE
Store all supplies:
Food, first aid supplies, fire fighting equipment.
Replenish and replace stocks.

INSPECTION SERVICE (over all)
Regular inspection of safeguards before and after, to see that all is working, all understood, etc.

ELECTRICITY AND LIGHTING
Turn off all lights.
Watch for live wires.
Provide for flashlights, battery radio sets.
Fuses—supplies—tools.

* * *

MISSISSIPPI CIVILIAN DEFENSE COUNCIL

SECTION ON HEALTH, WELFARE, AND CONSUMER INTEREST

Sub-Committee on Sanitation

H. A. KROEZE, Chairman

The country today is face to face with its greatest crisis. It is a fight for our very existence as a nation. Each and every one of us must join in wholeheartedly in this fight or we shall perish. Every individual has work to do in order to aid in the winning of this fight.

It has been amply demonstrated that no organized community is immune to destruction. This is true not only of your community but also of any community in the world. In order to lessen the chance of complete disaster to your community and in order to be better prepared, if and when disaster strikes, the Sub-committee on Sanitation for the Mississippi Civilian Defense Council has prepared the following suggestions to aid you in preparing your community for any emergency and as a guide as to what to do in matters pertaining to sanitation.

Water Supply

An adequate safe water supply is probably the most essential commodity for a community, not only for the health of the citizens but also for the prevention of its complete destruction by fire. Ample water is also very essential for the proper operation of our industries, which are now so essential for carrying out the struggle in which we are engaged. A third very important function which the water supply serves is the transporting of waste products from the community. It is absolutely essential, therefore, that our public water supplies be placed in order at this time to insure their proper operation should an emergency arise. It is our opinion that the following suggestions should be carried out by every community in the state, that has a public water supply.

1. All public water supplies should be immediately placed under guard. This is necessary to prevent sabotage. By water works is meant all pumping machinery, storage reservoirs, purification works, power stations, and other appurtenant apparatus necessary to the proper operation of the water works system. In addition to placing guards at strategic points, the water works properties should be fenced and all reservoirs and the like should be placed under lock and key. Indiscriminate visiting of water works properties should be prohibited. No one should be admitted to water works properties except officials and properly identified individuals on business.

2. All possible sources of water not now a part of the public system should be investigated as to the possibility of using them as a secondary source of supply. The investigation should include the amount of water that may be obtained, its quality, and the practical aspects of making the secondary source available to the public. It is most important that the quality of any secondary source of supply be determined before making it available for public consumption. The local county health department or the State Board of Health should be consulted as to quality.

3. An up to date plan of the water works system should be provided and placed in the care of officials. This plan is necessary because it is possible for something to happen to the operating personnel and, in that case, without such a plan immediate operation and repairs would not be possible. The plan should not only contain the necessary information but also a map of the distribution system showing all the distribution mains, sizes, valves, hydrants, and the like.

Routine checks should be made not only of all stand-by or emergency plant facilities but also of all valves, hydrants, and the like of the distribution system. Those found to be defective should be placed immediately in first-class working condition. An inventory of all spare parts should be made. Any old or abandoned equipment that has been discarded that yet may be serviceable should be repaired and made available for any eventuality.

4. All power facilities should be strengthened and all power units tested regularly to see that they are kept in first-class working condition. In case of electrically-driven machinery, as many sources of electrical energy as is possible should be made available.

5. A reserve supply of chemicals used in normal purification processes should be provided. Chemicals should be stored so as to minimize their deterioration and prohibit their contamination. A reserve stock of chlorine should be provided for all water plants. All new mains, repairs, or emergency connections should be treated with chlorine before placing in operation. A supply of H.T.H., perchloron, or fresh chloride of lime should be kept in stock at the plant for this purpose.

The following table is the suggested dosage for various sizes of pipes:

Pipe size in inches	Feet of pipe per application	Ounces of Chloride of lime 24 per cent available chlorine	Ounces of HTH or Perchloron 70 per cent available chlorine
2	64	0.5	0.2
4	64	1.0	0.5
6	64	2.5	1.0
8	48	3.0	1.5
10	64	7.0	2.5
12	48	7.5	3.0
16	32	9.0	3.5

How to apply the compound

1. Place the required amount of chlorine as the pipe is laid.

2. Open the endmost valve and hydrant on

the new pipe line and crack the gate valve on the main to which the new pipe is attached until the new pipe is filled with water. Then close both valves and allow the chlorinated water to stand in the new pipe for several hours.

3. Then open up successively all the hydrants on the line, beginning with that nearest the supply end of the pipe and flush until the water is clear and free of chlorine.

In the case of dead ends, instruct consumers connected to pipe to open up service taps until chlorine odor disappears.

After the disinfecting process has been completed, send to the State Hygienic Laboratory samples for bacteriological examination.

Experience in England has shown that often a bomb will break both sewers and water mains. When such a thing happens, often sewage enters the water pipes and consequently the pipes must be thoroughly flushed and disinfected with chlorine before placing the water main back in service. Also, it is most essential to restore the sewer line to operating condition as quickly as is possible. When a system is known to have been contaminated, the public should be warned to boil all water used for domestic purposes. The boiling of water will destroy the bacteria that may cause disease.

6. If your water system is equipped for continuous chlorination, this equipment should be kept in the best operating condition. Chlorine dosages should be stepped up to provide for an adequate chlorine residual in the distribution system. Frequent checks of chlorine dosages should be made daily and an adequate reserve stock of chlorine maintained.

Many cities have swimming pools equipped with chlorinating equipment. Such equipment can also be used at water plants. If such equipment is available in your city, arrangements should be made to transfer it to the water works plant in case of an emergency. Investigation should be made now of such equipment to see that it is in operating condition. If not, the necessary replacement parts should be ordered to have this equipment ready for emergency use.

The State Board of Health has two chlorinators on hand for emergency purposes. However, cities should make their own arrangements for such equipment as these two units are in frequent use throughout the state for various emergency purposes and would be wholly inadequate to meet such contingencies as might arise under present conditions.

7. An inventory of water works and sewerage materials should be made and where shortages of essential repair materials exist efforts should be made amply to replinish such stocks.

TEMPORARY HOUSING

It may become necessary to provide temporary housing facilities as a result of bombing of cities and towns or of some other disaster. In consideration of location of such a camp, the following items should govern the camp location:

1. Availability of an adequate and safe water supply.
2. Possible means of the disposal of excreta and other waste materials.
3. Well-drained area away from mosquito breeding.
4. Availability of electrical energy.

The water supply for such a camp should be examined as to bacteriological quality before use. Should sewer facilities be available, obviously suitable connections should be made. Temporary excreta disposal may be by pit latrines according to plans which will be provided by the Division of Sanitary Engineering. Refuse disposal should be such as not to create health hazards. All combustible material should be disposed of by burning. Non-combustible materials should be disposed of in such a manner as to prevent nuisance conditions or rat harborage. Food and shelter are essential for rat propagation. Refuse, if not properly disposed of, may provide both of these essentials. The rat makes possible the spread of typhus fever and other diseases.

FOOD SANITATION

1. Food is essential for continuation of life. Unless this prime essential is properly protected, it may be one of the chief agents for the destruction of life. One of the essential items of diet is milk, particularly for children. If milk is not obtained from healthy cows and properly handled, it may become a means of spreading disease. If possible, only graded and pasteurized milk should be used. Pasteurization will destroy the disease-producing organisms. If pasteurized milk is not obtainable and it becomes necessary to use raw milk, it should be boiled before using. If it is not possible to obtain pasteurized milk or properly to boil raw milk, then canned milk should be used.

2. Meat is an important item of diet and it may become necessary to slaughter animals locally. Should this become necessary, proper

facilities for slaughtering should be provided. If adequate refrigeration is not available, all meats should be thoroughly cooked immediately following slaughtering. No meat or meat products, other than canned meats, should be eaten raw or cold. Meat or meat products exposed may become contaminated with disease-producing organisms, particularly *Bacillus botulinus,* one of the causative agents of meat and other food poisoning. Thorough heating of foods immediately before serving will eliminate this possibility. Any food showing indications of spoilage should be destroyed.

3. Food storage should be such as to exclude the possibility of contamination. The storage facilities should not only be properly screened but also rat-proofed. If possible, adequate refrigeration should be provided. Quarters in which foods are prepared or served should be properly screened. Any fruits, vegetables, and the like that are eaten raw should be thoroughly washed in strongly chlorinated water immediately before consumption. Any unconsumed food remaining after a meal should not be served at the following meal without proper heating.

* * *

It was recognized at the beginning of the war that the national defense effort was a supreme undertaking, the ultimate success of which would depend upon the untiring energy and wholehearted coöperation of every group. That the Division of Sanitary Engineering has been alert to its many new responsibilities, along with other divisions of the State Board of Health, is reflected in the foregoing article. There must be no chances taken which might favor disease epidemics at this critical period.

Woman's Auxiliary
TO THE
MISSISSIPPI STATE MEDICAL ASS'N.

IN MEMORIAM

With profound sorrow, the members of the Northeast Mississippi Thirteen Counties Auxiliary record the death of one of their most zealous friends—Mrs. R. H. Christian. Mrs. Christian became a member of this auxiliary soon after it was organized, and its work in a peculiar degree claimed her interest and support. Likewise, she was eager to advance the usefulness of the Four-County Unit, which she loved and served also as president. Her wise counsel and enthusiasm for its aims were of unfailing encouragement to the doctors' wives of Lee, Itawamba, Pontotoc and Prentiss counties. Although Mrs. Christian was not permitted half the scriptural span of life, hers was a life of service, rich in results; and, it is pleasant to remember, her efforts were fittingly crowned with honors deservedly bestowed. Her willingness to serve wherever her talents were needed, her faithful attendance at the meetings and her optimistic attitude toward all problems touching life about her was not only felt in the auxiliary work, but her influence was far-reaching through her church and social activities.

With the sense of community-loss is mingled deep sympathy for the members of her family.

Mrs. W. H. Anderson,
Mrs. R. B. Caldwell,
Mrs. L. L. McDougal,
Committee.

State Program

MRS. W. K. STOWERS
Natchez, Miss.

Mrs. Stowers makes a last plea for record attendance at the state meeting, stressing the importance of every member having a part in the 1942 program.

She also reminds doctors' wives of the delightful and worth while opportunity of hearing the national president, Mrs. Mosiman.

Robert E. Lee Hotel, Jackson, Miss.
Tuesday, May 12—

9:00 A.M.—Registration.
12:00 Noon—Executive Board Meeting.
4:00 P.M. to 6:00 P.M.—Tea at Mrs. C. M. Speck, 2020 North State Street, Central Medical Auxiliary, Hostesses.

WEDNESDAY, MAY 13—

7:30 A.M.—Past-Presidents' Breakfast — Mrs. Harvey Garrison, 748 Gillespie Street, Hostess.
9:00 A.M.—General Session—Mrs. W. K. Stowers, Presiding.
Invocation—Dr. Girard Lowe, Jackson.
In Memoriam—Mrs. Henry Boswell, Sanatorium.
Address of Welcome—Mrs. W. L. Hughes, Jackson.
Response—Mrs. J. D. Williams, Gulfport.
Greetings from Dr. Augustus Street, President; Dr. H. Lowry Rush, President-Elect, State Medical Association.
Minutes of the Preceding Meeting—Mrs. H. C. Sheffield, Secretary.
Reports and Election of Officers.
1:00 P.M.—Luncheon, Edwards Hotel—Guest Speakers—Mrs. R. E. Mosiman, Seattle, Washington, President Woman's Auxiliary, American Medical Association; Advisory Board, Dr. Emma Gay, and Dr. T. M. Dye.
2:30 P.M.—Post Convention Board Meeting—Mrs. V. B. Philpot, Presiding.

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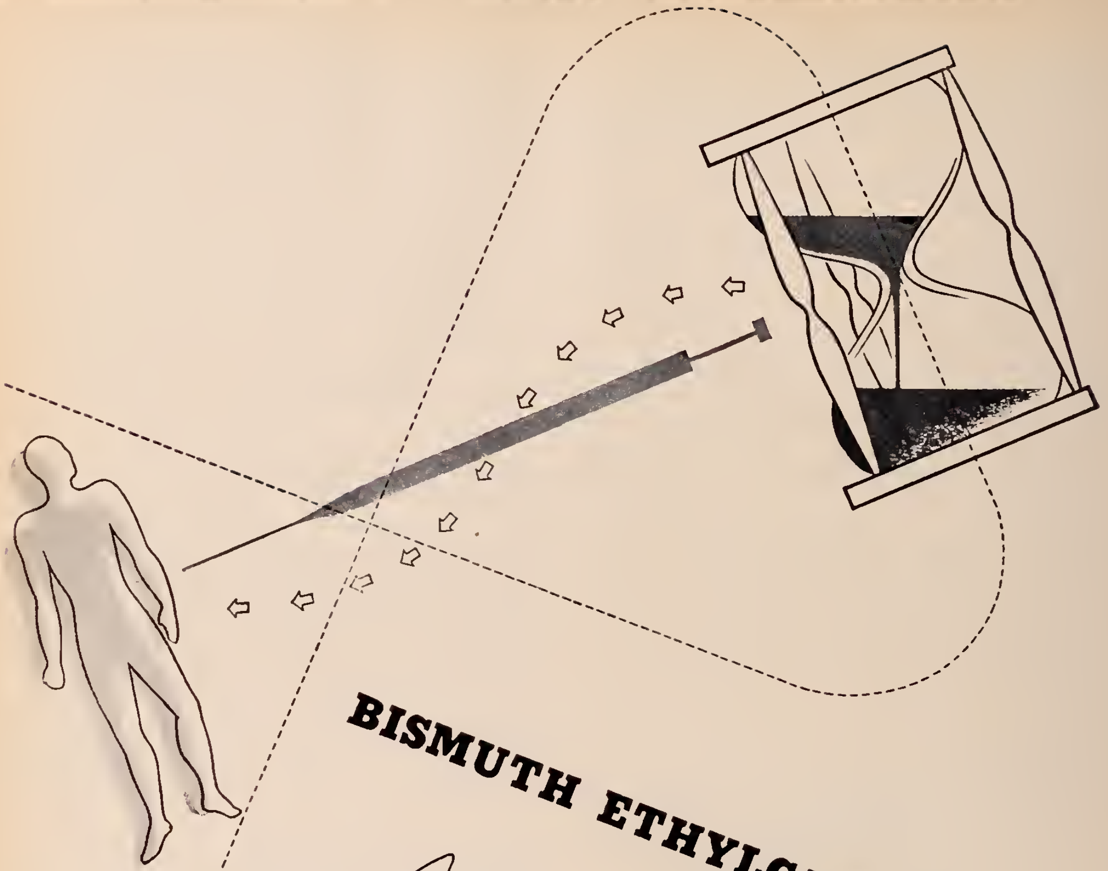

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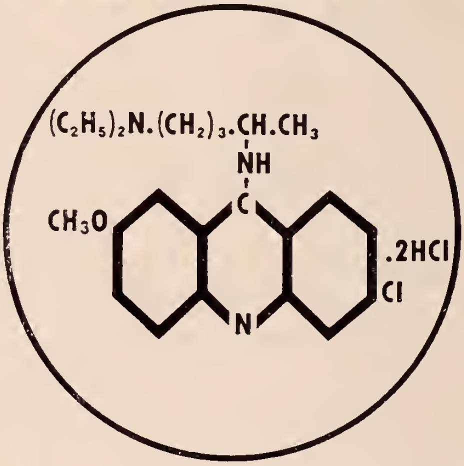

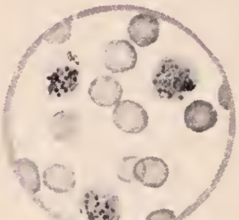

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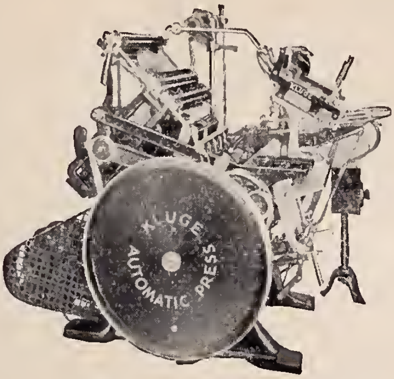

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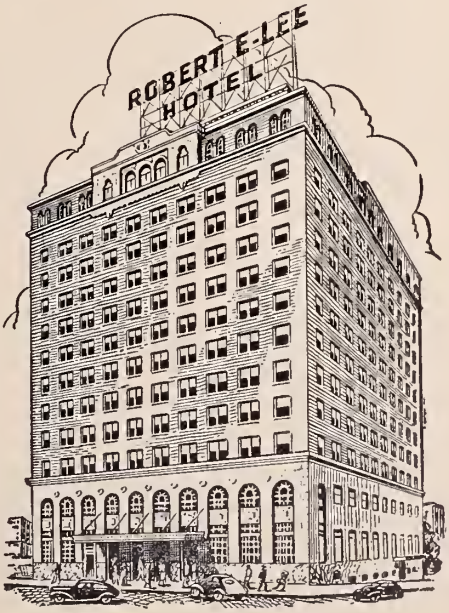

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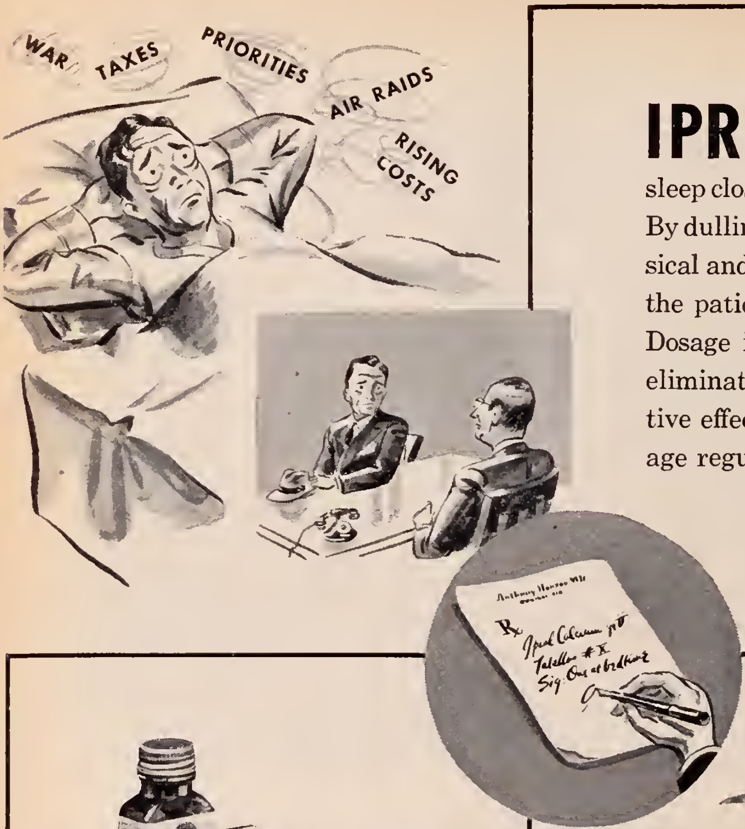
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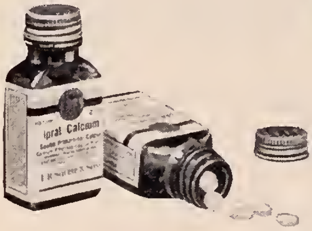
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